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ABSTRACT

This issue includes research that addresses the needs and the future of business education, its competencies, curriculum, technology, and ethics. "Editorial Comment: Calling All Business Educators What Can We Do?" (Chalupa) provides an overview of the issue. "Business Education in the United States: 1991-2000 National Association for Business Teacher Education Survey Results" (Perreault) identifies two areas of major change increase in technology courses and addition of online courses or programs. "Alternative Teacher Education Licensure/Certification for Business Educators" (Perreault et al.) examines the need for a model. "Competencies Required in the 21st Century of Entry-Level Fortune 500 Employees with Four-Year Business Degrees" (Porterfield, Forde) identifies important skills. "Curriculum Revision and Implementation: Implications for Business Teacher Education" (Williams) researches curriculum revision and standards implementation. "The Demand for Business Education Teachers in California as Perceived by Middle School and High School Principals" (Wilson, Plutsky) concludes teachers are and will be in demand. "21st Century Entry-Level Computer Skills Needed by Fortune 500 and Small Business Employees in Central Ohio" (Olinzock, Lazarony) finds neither size of business felt authoring an Internet Web page using HTML and integrating multimedia sound or video files were necessary skills. "An Analysis of the Status of Internet Usage Policy Among AACSB (International Association for Management Education) Schools" (Szul, McPherson) indicated a majority had an established policy. "Student Perceptions of the Effectiveness of Web-Based Courses" (Schramm et al.) reports student evaluations are generally positive. "Academic Dishonesty of Business Students in Selected Central Europe and United States Universities" (Lupton, Klemin) suggests Central European students engaged in more examination cheating. (YLB)

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ISSUE NUMBER 28

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NABTE REVIEW

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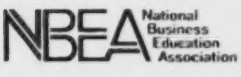

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National Business Education Association
1914 Association Drive
Reston, VA 20191-1596
(703) 860-8300 • Fax: (703) 620-4486 • www.nbea.org

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President
University of Maine at Machias
9 O'Brien Avenue
Machias, ME 04654

Dennis LaBonty
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Utah State University
BISE Dept.
Logan, UT 84322

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BA/OSY/BED
207 Business Building
Murray, KY 42071-0009

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School of Business
Emporia, KS 66801

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Greenville, NC 27858

Heidi R. Perreault
Research Coordinator
Southwest Missouri State University
CIS Dept.
Springfield, MO 65804

Linda F. Szul
Assoc. Program/Research Coordinator
Indiana University of Pennsylvania
221 Eberly College of Business & Inf. Technology
Indiana, PA 15705

Marilyn R. Chalupa
Editor
Ball State University
203 WB, BEOA Dept.
Muncie, IN 47306

Wayne Moore
Associate Editor
Indiana University of Pennsylvania
Tech Support & Training Dept.
224 Eberly College of Business
Indiana, PA 15705

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2000–2001 *NABTE Review* Editorial Board

The manuscripts for the *NABTE Review* are selected through a blind review process. The authors' names are removed from manuscripts, and each manuscript is directed to a minimum of three reviewers. Reviewers use a set of criteria to evaluate the manuscripts they receive. In addition, they provide a general recommendation on whether the manuscript should appear in the current issue.

These reviewers do not know what manuscripts are directed to them for review, and they are not informed of the overall results of the review. They learn what manuscripts are included in the *NABTE Review* in the same way that all other NABTE members do, that is, through the publication of the *NABTE Review*.

In forming the board to serve for the 2000 and 2001 issues, regional NBEA presidents were asked for recommendations for review board members. In addition, NABTE members were asked to indicate their interest in serving on this board. When the request for reviewers for the *NABTE Review* went out, there was an overwhelming response from NABTE members. Members who were unable to contribute for a second year are replaced from the region requiring representation. The editor wants to thank the many NABTE members who expressed interest in being a reviewer. Reviewers usually serve for two years; this is the second year and new reviewers are being sought for the 2002 and 2003 issues. The current reviewers may request to be considered as reviewers again.

These are the members of the *NABTE Review* Editorial Board for the 2000 and 2001 issues. The review process is one that sets aside all concerns except the quality of the manuscript and the value it has to the profession. We thank these members for their efforts in making the 2001 spring and fall *NABTE Review* issues possible.

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The editor also expresses thanks to these individuals for their efforts and their relevant and timely responses to the review process.

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Editorial Comment

Calling All Business Educators— What Can We Do?

Marilyn R. Chalupa, Ball State University, Muncie, Indiana

Over the years, the Policies Commission for Business and Economic Education (PCBEE) has developed policy statements to "identify and define both existing and emerging issues in business and economic education (p. vi)." Policy Statement 39, "This We Believe About the Future of Business Education," developed in 1986, stated that the "business education curriculum must reflect the impact of computers in the world of work and society in general (p. 81)." Additionally "business educators must become involved in planning and developing curriculum based upon research.... Teacher educators must provide leadership in conducting and applying research to assure that all instruction is based on valid knowledge about teaching and learning, new concepts, and technological and cultural developments in the workplace.... Professional organizations must provide leadership to identify and address concerns of business education ..." (p. 82).

This issue of the NABTE REVIEW includes research that addresses the needs and the future of business education, its competencies, curriculum, technology, and ethics. The National Association for Business Teacher Education (NABTE) biennial survey monitors changes and compares current business education-related statistics to prior years. Of major concern is the dwindling membership of NABTE. With fewer graduates from doctoral programs and a shortage of business teachers nationwide, how will business education survive in the schools and in colleges and universities? How will teachers become certified or licensed to teach business education? How will teachers deliver instruction? What will business teachers include as content in the curriculum? Business educators need answers to these questions.

Perreault's biennial NABTE study identifies two areas of major change—the increase in technology courses and the addition of online courses and/or programs. As Perreault's study also identified, filling positions in business education may be difficult. Thus, some positions (1) may be dropped, (2) may be filled by an alternatively certified individual, or (3) may be filled by someone from outside business education.

Another interesting finding relates to the importance of roles associated with NABTE. The three most important roles included: (1) promoting a better understanding of the significance of business and economic programs in schools, (2) improving undergraduate/graduate programs and preparing business teachers, and (3) developing high standards for business teacher certification. Two roles not rated as highly by the respondents focused on research and working with others to improve educational opportunities. Why do some NABTE institutions have business education programs thriving and growing while others close business education programs or continue the struggle to maintain enrollment? Some of the changes in program offerings include eliminating the very content that made our programs strong. Business educators need to rethink what its content is—it shouldn't be just teaching computer courses. Only the tools have changed the way we go about accomplishing tasks; many concepts that are slowly being phased out in records administration, word processing, and keyboarding courses, etc., are still relevant today. Do some of these concepts need to be more clearly identified and related to technology? Do we need to incorporate selected relevant concepts into other courses? There is a need for research that retests educational theories, since technology has become so heavily integrated into the classroom and today's typical student first used technology as a toy. Researching relevant issues such as this would make a valuable contribution to the field.

The alternative teacher licensure/certification study by Perreault, Chalupa, Richerson, Groneman, Bartel, Joyner, and LaBonty examines the need for a model that NABTE institutions and state departments of education may use for alternative certification. NABTE members and institutions should take a proactive role in developing such a model. Policy Statement 44, developed in 1988, provides a framework for achieving excellence in business teacher education. Policy Statement 62, developed in 1998, identifies standards for business teacher education. These policy statements can be used as guidelines in the development of a model for alternative certification.

Porterfield and Forde's study should help business school faculty evaluate programs to determine whether the business curricula includes the competencies and skills needed for 21st century entry-level employees. It is interesting to note what skills were found to be important.

Williams researches curriculum revision and implementation of the National Business Education Association (NBEA) and NABTE standards. Curriculum revision and implementation are only as successful as people's willingness

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to objectively assess and adapt their programs. How willing are we to teach a new course or revise a course implementing recommended revisions?

Wilson and Plutsky examine the need for business educators in California, often considered a "bell weather" state. Many other states are now experiencing or will experience similar situations. Some of the recommendations in this study align with the recommendations of the Perreault, Chalupa, et al. alternative certification study. Why do some schools eliminate business education programs? How do business education teachers assist elementary or middle school teachers with computer literacy and keyboarding skills. Do business educators make sure that keyboarding is taught correctly? How do methods courses address this trend?

While these studies focus on the status of the profession, studies by Olinzock and Lazarony; Szul and McPherson; and Schramm, Wagner, and Werner address technology-related issues. Olinzock and Lazarony's study identifies computer skills and computer application skills needed by entry-level employees in small business and Fortune 500 companies. Their findings indicate what computer skills are necessary and not necessary for entry-level employees. It is interesting to note that neither size of business felt authoring an Internet Web page using HTML and integrating multimedia sound or video files were necessary skills. To be on the cutting edge or "to do it first," some programs quickly develop such courses and include them in their curricula. What criteria do business educators use to determine whether to develop a course, to keep or eliminate the course, or to incorporate the essential concept in another course? Policy Statement 34, developed in 1984, addresses computer literacy and identifies three progressive levels of instruction. What necessary skills are addressed at each of the three levels? Is there a need for articulation between secondary and postsecondary/collegiate programs regarding technology skills?

Szul and McPherson examine Internet usage policies at AACSB accredited schools/colleges of business. Policy Statement 51, developed in 1992, suggests that ethics for business should be included in the curriculum. Business educators need to decide where and how to incorporate a topic about monitoring employees' use of technology in the workplace.

Schramm, Wagner, and Werner look at student perceptions of the effectiveness of Web-based courses. Enrollees need appropriate training to access the Web-based course, and faculty need adequate support and appropriate training for students to achieve the appropriate outcomes. Policy Statement 65 suggests, "… an effective and coordinated distance learning program is a valuable component of the business education curriculum." However, business educators must consider what knowledge, skills, and abilities are essential in the curriculum and which teaching and learning activities should be revised for distance learning. Policy Statement 61 suggests that the role of business educators is to facilitate online learning. Research could examine how Web-based courses affect the teacher's role.

The study by Lupton and Klemin examines academic dishonesty of business students in the U.S. and in selected Central European universities. Their recommendations suggest that business educators teaching abroad and hosting international students need to better understand the attitudes of different student populations and the association with classroom management. Their findings correlate with Policy Statement 52, developed in 1992, that suggests that education about global marketplace attitudes, skills, and knowledge will allow students to adapt to the changing international business marketplace.

What can business educators do? First, review the policy statements and the NBEA and NABTE standards. Second, review your business education curriculum objectively. Determine what outcomes are essential and at what level of accomplishment. Reexamine current student activities and determine which ones could be more relevant. How are ethics, professionalism, and global issues integrated? Are students thinking critically and transferring knowledge to new ways or are they just pushing buttons and following step-by-step directions? How often do business educators talk to students about a career in education? How often do they communicate to counselors, administrators, and business leaders what students really learn in a business education program besides keyboarding and computers? Promoting business education and business teacher education does not have to be grandiose. Over time, little things add up and make a big difference.

If we truly care and feel passionate about what we do, we will promote our profession so we can continue to train people to be business teachers. We cannot expect someone else to do it for us!

REFERENCES

Policies Commission for Business and Economic Education. (1997). *Policy Statements*. Cincinnati, OH: South-Western Educational Publishing.

_____. Policy Statements 61 and 65. [Online]. Available: http://www.nbea.org/curfpolicy.html.

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Manuscript Preparation Guidelines for the 2002 *NABTE Review*

The *NABTE Review* is a refereed journal published annually in the fall as a separate publication and in the spring as a part of the April issue of *Business Education Forum* by the National Association for Business Teacher Education. Readership consists primarily of business teacher educators, and manuscripts submitted should be of interest to this group. A special honor to an author whose manuscript is accepted for publication will be an award presented at the NABTE business session of the forthcoming NBEA convention.

To publish in the *NABTE Review* at least one of the authors must be a professional member of NBEA, and one of the schools must be an institutional member of NABTE. Submit your manuscript exclusively to the *NABTE Review* editor by August 15, 2001. If the manuscript or a similar one is accepted by another professional journal or if it is readily available from any other professional publication, it cannot be published in the *NABTE Review*. Authors' names will be removed from the manuscript before they are sent to the Review Committee. Each manuscript will be evaluated by at least three members of the Review Committee. The names of reviewers assigned to specific manuscripts will not be revealed. Authors will be notified of the publication decision by December 31 of the year of submission.

The guidelines for manuscript preparation are:

1. Provide content of interest to business teacher educators. See criteria for review below.*
2. Submit title page, abstract, content, and references. Keep the overall length between 3,000 to 4,000 words, although some flexibility in length is permissible.
3. Attach human subject approval to the manuscript when required by your institution.
4. Unless noted otherwise here, follow the Publication Manual of the American Psychological Association (Fourth edition, 1994, commonly referred to as the "APA Style Manual") for the overall manuscript, including text, headings, references, and tables.
5. Use DOS/Windows-compatible word processing software (MS Word preferred, 12 point font size), and double space the manuscript. Do not use special table or formatting features for preparation of the manuscript. The simplest possible formatting should be used.
6. Prepare the title page to include the title of the article, your name, school, school address and telephone number, home address and telephone number, Internet addresses, and a total word count. Prepare a running head of the first 3-4 words of the title to appear on the title page and all other pages of the manuscript. Avoid identifying yourself, your school, or your state on any page other than the title page.
7. Proofread carefully for errors in grammar, punctuation, and spelling. Except for title pages, manuscripts are sent to the Review Committee in the form they are received.

Submit the following to the editor:

FIVE printed copies of your manuscript. Keep a copy for yourself. The manuscripts will not be returned to authors.

Submit your manuscript exclusively to the *NABTE Review* editor by August 15, 2001: Dr. Wayne A. Moore, Chairperson, Technology Support and Training, Eberly College of Business and Information Technology, 664 Pratt Drive, Indiana, PA 15705-1087.

If you have any questions, please contact the editor at Indiana University of Pennsylvania by telephone 724-357-5647, FAX 724-357-3013, or E-mail: moore@grove.iup.edu

*Criteria for publication and review. To publish in the NABTE Review at least one of the authors must be a professional member of NBEA, and one of the schools represented must be an institutional member of NABTE. The Review Committee rates each submission on the following criteria: importance to business teacher educators (see section on title page, 2001 *NABTE Review* Editor, *NABTE Review* statement of purpose); relevance and quality of literature review; appropriateness of design and procedures; types of resources/subjects; design and use of instruments; presentation of results/analysis; discussion (conclusions and recommendations); overall clarity and organization of manuscript; and contribution to learning/curriculum improvement.

2001 *NABTE REVIEW* EDITOR

The *NABTE Review* is a periodic publication of the National Association for Business Teacher Education (the Institutional Division of the National Business Education Association), 1914 Association Drive, Reston, VA 20191-1596. All correspondence regarding this issue should be sent to Dr. Marilyn R. Chalupa, *NABTE Review*, 203 WB, Ball State University, Muncie, IN 47306. No responsibility for the views expressed by the authors is assumed by the editors.

The *NABTE Review* is designed to promote and strengthen business education in colleges and universities, community colleges, and secondary schools through improved business teacher education at the collegiate level.

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Business Education in the United States: 1999–2000 NABTE Survey Results

Heidi R. Perreault, Southwest Missouri State University, Springfield, Missouri

Every two years the National Association for Business Teacher Education (NABTE) supports a study to report on the status of business education programs and on current issues relating to the field of business education. This report details the findings from the fourteenth NABTE survey.

The survey is designed to collect data on the status of business education programs for the 1999–2000 academic year. Dennis J. LaBonty, Arthur L. McEntee, Michael G. Curran, Jr., Sharon Lund O'Neil, H. Robert Stocker, Charles R. Hopkins, B. June Schmidt, and Michael Bronner reported prior studies' results.

PROCEDURES AND POPULATION

NABTE Questionnaire Number 14 was designed to correspond to previous NABTE surveys so that current findings could be compared to previous years' findings. Minor revisions were made to reflect changes noted in the previous study (NABTE Questionnaire Number 13) and to improve the readability and format. The four-page questionnaire was sent with a cover letter to all 120 current NABTE member institutional representatives in November 2000. The National Business Education Association provided institutional membership status verification and mailing labels. In December 2000 a second mailing containing a survey and letter was sent to all institutional representatives who had not responded to the first request. For the 1999–2000 survey, the return rate was 77.5% with 90 usable responses. Respondents represented each of the five regional divisions. The regional affiliation for respondents is displayed in Table 1.

Table 1. Responding Institutions' Affiliation for Current and Previous Study Years

NBEA Regions	1997–1998 Respondents		1999–2000 Respondents	
Southern Region (SBEA)	25	30.1%	28	31.1%
Eastern Region (EBEA)	12	14.5%	12	13.3%
North Central Region (NCBEA)	20	24.1%	16	17.8%
Mountain Plains Region (M-PBEA)	15	18.1%	19	21.1%
Western Region (WBITE)	11	13.3%	15	16.7%
Total*	83	100.0%	90	100.0%

*Total percents reflect rounding error.

Membership in NABTE shows a decline for each year of the survey. Current institutional membership, at 120 institutions, is approximately 40% of what it was in 1980, the first year of the study. During this year's study, three surveys were returned blank with an explanation that business education was no longer offered at the institution. NABTE membership and response rates for all study years are compared in Table 2.

Table 2. NABTE Membership and Survey Responses from 1981–2000

Year*	Membership and Number of Surveys Mailed	Number and Percentage of Surveys Returned	Returned Surveys Not Usable	Surveys Included in Analysis
1980–1981[a]	305	186 (61.0%)	18	168
1981–1982[a]	296	172 (58.1%)	18	154
1982–1983[b]	272	161 (59.2%)	5	156
1983–1984[c]	265	165 (62.5%)	4	161
1984–1985[d]	253	151 (59.7%)	4	147
1985–1986[e]	250	152 (60.8%)	8	144
1987–1988[f]	234	164 (70.1%)	10	154
1989–1990[g]	236	161 (68.2%)	7	154
1991–1992[h]	214	152 (71.0%)	7	145
1993–1994[i]	188	134 (71.3%)	3	131
1995–1996[j]	170	104 (61.2%)	3	101
1997–1998[k]	139	87 (62.6%)	4	83
1999–2000	120	93 (77.5%)	3	90

*Information reported by: [a]Bronner (1983); [b]Schmidt (1984); [c]Schmidt (1985); [d]Hopkins (1986); [e]Hopkins (1987); [f]Stocker (1989); [g]Bronner (1991); [h]O'Neil (1993); [i]Curran (1996); [j]McEntee (1997); and [k]LaBonty (1999).

FINDINGS AND DATA ANALYSIS

To facilitate the comparison of data between the current findings and previous studies, a format consistent with prior reporting was used. There were two major reporting sections. The first section reports on data pertinent to the institutions participating in the study such as academic year format, undergraduate business education program information, undergraduate and graduate enrollments, and business education faculty rank and salary. The second section presents the respondents' opinions on the role of NABTE and on problems/issues/trends in business education.

Institutional Data

The majority of the NABTE institutions responding to the survey are public (76 or 85%) and 14 are private institutions. Most of the institutions (95.6%) are on a standard 15- or 16-week semester system; however, four institutions are on the quarter system, and one reported the term as a 14-week trimester.

Program Location, Graduates, and Accreditation

Of those responding, 56% indicated that the business education program is housed in a College or Department of Business, 27% indicated that it is housed in the College/Department of Education, and 18% indicated the program was housed in neither the Business nor Education College/Department. When the findings were compared to the previous two studies, an increase in the percentage of programs being housed outside both the Colleges/Departments of Business and Education is evident (See Table 3).

Table 3. Location of Business Education Program (in %)

Survey Year	College/ Department of Business	College/ Department of Education	Neither College/ Deparment of Business nor Education
1995–96	60%	30%	10%
1997–98	57%	30%	13%
1999–00	56%	27%	18%

Mean undergraduate enrollment at the reporting institutions showed little change (See Table 4). The average business education doctoral enrollment, however, showed a considerable drop. Nine of the institutions grant doctoral degrees. The combined mean enrollment for the nine institutions is 6 as compared to a mean enrollment of 12 reported for the 1997–1998 survey year and a mean enrollment of 29 for the 1995–1996 survey year.

Table 4. Mean Business Enrollments

Year	Undergraduate	5th Year Certificate	Master's	6th Year Certificate	Doctoral
1980–81	41	—	23	4	16
1981–82	38	—	21	4	17
1982–83	49	—	24	7	18
1983–84	44	—	23	5	14
1984–85	44	—	21	7	15
1985–86	42	—	25	4	14
1987–88	42	6	23	6	11
1989–90	38	11	23	5	5
1991–92	36	12	2	5	9
1993–94	21	3	2	13	31
1995–96	24	1	9	1	29
1997–98	33	5	17	5	12
1999–00	30	9	15	4	6

Table 5 presents a comparison of the number of teaching degrees and/or certificates, revealing a considerable decrease in the number of teaching degrees and teaching certificates awarded by the responding institutions. The reduction in the number of teaching degrees/certificates may account for the fact that 78% of the respondents felt that the demand for secondary level business teachers exceeds the supply. Only 7% of the respondents thought that supply exceeds demand for business teachers at the secondary level.

Table 5. Degrees and Certificates Awarded by Year

Year	Teaching Degrees	Teaching Certificates	Non-Teaching Degrees
1992–93	1,233	1,455	325
1993–94	1,099	1,473	319
1994–95	757	677	515
1995–96	701	685	582
1996–97	592	416	170
1997–98	578	418	180
1999–00	469	308	210

In Table 6 the accreditation agencies are listed and compared by study year. For each study year reported, the majority of respondents indicated National Council for Accreditation of Teacher Education (NCATE) accreditation status. Regional accreditation status consistently has been reported by at least one third of the respondents.

Faculty Rank, Status, Responsibilities, and Salary

The rank and full- or part-time status for faculty at the NABTE institutions responding to the survey are presented in Table 7. The average number of full-time full, associate, and assistant professors has changed little over the ten-year period represented by the study years. Typical faculty responsibilities continue to include the traditional mix of teaching, research, and service (or other) duties. As noted in the 1996–1997 report (McEntree, 1997), however, many faculty members do not have research as part of their assignment. Instead their duties are limited to teaching or teaching and other (non-research) duties.

As illustrated in Table 8, faculty positions are available and openings are anticipated in the coming year. Most of the respondents indicated zero or one opening, but four institutions expect to have two openings and one institution expects to have three openings during the 2000–2001 academic year. It may be difficult to fill those positions as 37% of the respondents indicated they felt that the demand for faculty exceeds the supply; 33% felt the supply equals the demand for faculty members.

Salary information by rank and gender are shown in Table 9. As has been noted in previous years' studies, there are more females in the rank of assistant and associate professor while more males than females hold the rank of professor.

NABTE'S ROLE AND CURRENT ISSUES

Respondents were asked to rank the importance of five roles associated with NABTE. Each of the roles was selected by at least five or more of the respondents as being the most important role, indicating that all of the roles are important and should be continued. The three roles identified by at least

Table 6. Degrees and Certificates Awarded by Year

Agency	1989–90 N=154	1991–92 N=154	1993–94 N=145	1995–96 N=101	1997–98 N=83	1999–00 N=90
NCATE	124 (81%)	114 (74%)	110 76%)	76 (75%)	61 (73%)	69 (77%)
AACSB*	30 (19%)	26 (17%)	24 (17%)	0 (0%)	27 (33%)	19 (21%)
NASDTEC**	15 (1%)	12 (1%)	39 (27%)	2 (2%)	4 (5%)	3 (3%)
Regional	40 (26%)	50 (33%)	55 38%)	38 (38%)	31 (37%)	31 (34%)
Other	13 (1%)	15 (1%)	21 (14%)	12 (12%)	13 (16%)	13 (14%)

Note: Institutions could select more than one accreditation status.
*AACSB is now known as the International Association for Management Education.
**National Association of State Directors of Teacher Education and Certification

Fewer than ten respondents selected the remaining two roles as being the most important NABTE roles. Those roles were (1) Stimulate and disseminate research in business education, and (2) Cooperate and work actively with other associations to improve educational opportunities for all. The results mirror the 1997–1998 study by LaBonty (1999) in which research was perceived as a less important role than was curriculum leadership and promotion of business education.

Table 7. Business Teacher Education Faculty Rank, Status, and Employment by Year

Rank and Status	Number of Institutions				Number of Faculty Employed				Average per Institution			
	1989–90	1991–92	1997–98	1999–00	1989–90	1991–92	1997–98	1999–00	1989–90	1991–92	1997–98	1999–00
Professor												
Full-time	91	99	62	61	179	195	120	110	1.16	1.34	1.45	1.24
Part-time	9	6	10	10	20	6	14	15	0.13	0.04	0.17	0.17
Associate Professor												
Full-time	87	91	48	45	142	158	84	76	0.92	1.09	1.01	0.85
Part-time	7	10	4	6	9	16	5	8	0.06	0.11	0.06	0.09
Assistant Professor												
Full-time	95	81	36	47	174	149	69	84	1.13	1.03	0.83	0.94
Part-time	10	27	4	2	15	30	11	6	0.10	0.21	0.13	0.07
Other												
Full-time	39	34	17	18	63	53	26	21	0.41	0.37	0.31	0.24
Part-time	49	43	20	27	102	107	61	71	0.66	0.74	0.73	0.80

The number of institutions responding to the survey for each period is: 1989–90, N=154; 1991–92, N=145; 1997–98, N=83; 1999–00, N=89*
*One institution did not provide information for 1999–00.

Table 8. Faculty Vacancies Compared by Year

	1994–95	1995–96	1996–97	1997–98	1999–99	1999–00	Anticipated 2000–01
Number of vacancies	31	33	13	24	18	25	24

Table 9. Salary by Rank and Gender

	Professor Male (50)	Professor Female (40)	Associate Male (26)	Associate Female (51)	Assistant Male (29)	Assistant Female (47)
$29,000 or less	0	0	0	0	1	1
$30,000–34,999	0	0	0	0	1	5
$35,000–39,999	0	0	0	3	7	5
$40,000–44,999	2	1	1	3	6	15
$45,000–49,999	1	2	2	6	7	12
$50,000–54,999	2	7	7	14	5	8
$55,000–59,999	5	7	5	9	2	1
$60,000–64,999	12	5	6	7	0	0
$65,000–69,999	5	5	4	5	0	0
$70,000–74,999	7	6	1	4	0	0
$75,000+	16	7	0	0	0	0

Note: Numbers represent those institutions responding to the survey item. Not all institutions reported salary nor indicated the number of individuals within a certain salary range.

20 or more respondents as being the most important were (1) Promote a better understanding of the significance of business and economic programs in schools, (2) Improve undergraduate/graduate programs preparing business teachers, and (3) Develop high standards for business teacher certification.

The need for curriculum leadership is again indicated by the responses provided to an open-ended question on the major issues and trends in business education. Over one third of the respondents indicated that changing technology is an important issue for business education. Some respondents noted the need for constant updating and retraining while others were more concerned that technology was driving the curriculum.

The second major issue identified by the respondents relates to declining enrollments. Approximately one third of the respondents indicated the teacher shortage as a major issue, with others listing related issues such as declining programs and difficultly recruiting good students. One issue that also may be a partial solution to recruiting and enrollment problems is to develop alternative certification/licensing options. Not all respondents saw alternative licensing as a positive solution. Some questioned the quality of teacher preparation with alternative programs.

At least 25% of the respondents indicated that the teaching profession itself is an issue and that both recruiting students into teaching majors and retaining good teachers are important issues facing the profession. Problems, listed as

issues that are associated with teaching as a profession, include low salaries and poor image associated with educational careers. Other issues (listed by less than 10% of the respondents) relating to problems associated with teaching in the high schools were discipline problems, lack of administrative support, unrealistic teaching assignments, and poor technology/equipment.

Respondents were also asked to disclose any substantial changes to their programs. The change most often indicated (16 respondents) was adding or strengthening technology course(s). Other curriculum changes named were dropping such courses as records management, introductory word processing and keyboarding, and shorthand. Five respondents indicated the addition of online courses and/or programs.

SUMMARY

The biennial survey is a means for monitoring changes and comparing current business education-related statistics to prior years. By noting the changes, NABTE Board members can adjust the focus of the organization and provide support to institutions on current issues. The information is also useful to a NABTE institution wanting to compare its faculty duties, salaries, and student enrollment to other NABTE institutions.

The changes noted in this year's study mirror those in recent studies. They include dwindling NABTE institutional memberships, fewer doctoral program graduates, and reduction in the number of teaching degrees and/or certifications. The average number of faculty per institution and typical faculty duties (a mix of teaching, research, and other) remain stable.

Major issues identified by the respondents were keeping up with technology, recruiting quality students, and the shortage of business teachers. The respondents noted that the teaching profession itself is an issue because of low salaries and image. Major changes noted by the respondents were an increase in technology courses and the addition of online courses and/or programs.

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Alternative Teacher Education Licensure/ Certification for Business Educators

Heidi R. Perreault, Southwest Missouri State University, Springfield, Missouri
Marilyn R. Chalupa, Ball State University, Muncie, Indiana
Ginny L. Richerson, Murray State University, Murray, Kentucky
Nancy Groneman, Emporia State University, Emporia, Kansas
Kimberlee Bartel, Central Washington University, Ellensburg, Washington
Randy L. Joyner, East Carolina University, Greenville, North Carolina
Dennis LaBonty, Utah State University, Logan, Utah

With the shortage of business teachers in the U.S., NABTE adopted a position statement in 2000 that indicated, "... both traditional and alternative business teacher licensure/certification programs must be designed and offered by accredited colleges and universities." An analysis of current practices for alternative licensure/certification of business educators in the United States of America was undertaken to identify the process used for alternative licensure as well as the requirements for and delivery of such licensure. This study examined alternative licensure/certification of business educators in the U.S. to identify how alternative certification was accomplished and what professional preparation elements were delivered and required.

Of the 53 states and territories surveyed, 32 (60%) instruments were completed and returned. In addition to obtaining information from the United States and its territories, a comprehensive literature review examined the need for alternative certification, compared the alternative certification approach of preparing teachers with the traditional certification approach, examined the economic context for alternative routes of certification, and identified the current status of alternative certification and the effectiveness of alternative certification. An analysis of the collected data indicated that alternative licensure/certification has been and continues to be a viable method for maintaining business education programs in the school systems of the United States of America.

The shortage of business teachers across the United States has been a prime concern of the National Association for Business Teacher Education (NABTE) for several years. Business teacher educators across the country have been trying to increase the business teacher supply by improving student recruitment and by offering alternative business teacher licensure (certification) programs.

By completing alternative licensure programs, students can often become licensed business teachers in a shorter time frame than if they completed a traditional business teacher education program. To meet the demand for business teachers quickly, some universities and private, for-profit corporations have created short-term alternative licensure programs. Some alternative programs involve only a couple of weeks of coursework beyond a bachelor's degree before the students are qualified to be full-time business teachers. Consequently, some of these programs lack both the depth and breadth of business and professional education subject matter needed to prepare "qualified" business teachers.

Two primary objectives of NABTE include evaluating and improving programs for business teachers and encouraging high standards for the certification of business teachers. To meet those objectives and to address concerns about the quality of alternative business teacher licensure programs, in April 2000, NABTE adopted the following position statement on alternative teacher education programs:

> NABTE recognizes that the United States is experiencing a nationwide business teacher shortage and that the supply of business teachers needs to increase. In order to provide "qualified" business teachers for our schools, NABTE believes that both traditional and alternative business teacher licensure/certification programs must be designed and offered by accredited colleges and universities.

In order to fulfill its mission, NABTE needs to provide information to help universities develop and evaluate alternative licensure programs and help prepare "qualified" business teachers across the United States.

REVIEW OF LITERATURE

Annually, personnel directors in public school districts across the nation must hire new teachers. Though "new teachers" are often thought to be recent graduates of teacher education programs in their early 20s, this is not always the case. The percentage of public school teachers in the United States in their 20s is decreasing; almost half of the teachers are over 45, compared to 34% in 1986 and 27 % in 1990 (Feistritzer & Chester, 1996, p. 9). Henke, Geis, and Knepper (1996) found that one-third of education graduates do not teach immediately following graduation. Almost one-fourth of the public school teachers surveyed by Feistritzer and Chester (1996) reported pursuing other occupations during the year before they entered teaching. Of teachers surveyed, 29% did not hold a bachelor's degree in education, compared to 35% in 1990 and 26% in 1986 (p. 23).

Policymakers continue to make decisions regarding requirements for teaching in each state. An increasing number of states have implemented policies that allow college gradu-

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ates without professional training in education to enter teaching through alternative routes. These candidates begin teaching while they pursue standard certification. They may or may not receive some training before they assume full responsibility in the classroom. Feistritzer (1997) reported "rapid development" of alternative routes at the state level:

- By 1997, 41 states and the District of Columbia were operating teacher certification programs that provided alternatives to traditional approved college teacher preparation programs;
- States reported 117 additional alternative programs sponsored by colleges and universities; and
- It is estimated that more than 75,000 teachers have been licensed through state alternative programs. This number did not include thousands more in alternative programs sponsored by colleges and universities (Feistritzer, 1997, p. 2).

As interest and participation in alternative certification programs continue to grow, state education agencies and teacher education institutions must respond to the alternative routes to teaching that are being established by policymakers. Some view these alternatives as positive means of attracting talented candidates to careers in teaching. The general public, and teachers themselves, tend to question the value of professional preparation. Of teachers surveyed, 73% reported that courses in their teaching area were "very valuable," but only 37% said that education courses and in-service activities were "very valuable" (Feistritzer & Chester, 1996, p. 21). Others are concerned about the possible negative impact of alternative routes to teaching on student learning (Bradshaw & Hawk, 1996). They question the quality of teaching performance that can be expected of candidates who have not completed a teacher preparation program nor had an opportunity to develop the pedagogy that lies at the heart of traditional teacher education.

To address the teacher shortage and alternative licensure or certification, a definition of alternative teacher licensure or certification and the history and present status of alternative certification policies are described. Further, the literature concerning the effectiveness of alternative certification is summarized, and contradictions to the effects of alternative certification policies on different stakeholders are identified.

THE NEED FOR ALTERNATIVE CERTIFICATION

Teacher shortages are uneven across states, districts, and teaching areas, and the composition of teaching professionals is less likely to reflect the diversity of the student population. In some cases, efforts to raise standards for traditional undergraduate programs have reduced the number and size of those programs, thus reducing the number of new teachers entering the labor pool and making it more difficult for local school districts to fill teaching vacancies. Several trends are apparent.

- As opportunities for employment and higher salaries outside of education have increased for women and minorities, the number of teacher education graduates, especially minorities, has decreased (Harris, 1993).
- There is increasing concern about the continuing pool of licensed teachers who do not teach and high attrition rates for those who do (Simmons, 1996).
- Teacher shortages are often most acute where the challenges are greatest, including inner cities (Haberman, 1994) and remote rural areas (Bradshaw, 1991).
- Projections that 40% of our nation's current public school teaching force will retire by the 2003–2004 school year come when student enrollments are rising and class size is being reduced (Reichmann, 1996).

Increasing numbers of candidates with degrees and experience outside of education are expressing an interest in teaching and being hired to teach. Previous research has shown that the teacher shortage has brought alternative certification to the forefront, and this has presented new issues that have been addressed by other researchers. Research has revealed that many of the states have different requirements for their alternative certification programs. Historically, the primary source for teachers in elementary and secondary schools were the colleges and schools of education. Up to 40% of the individuals that graduate from these colleges or schools of education and become licensed do not become teachers. Of the qualified teachers that do teach immediately after college, approximately 33% leave the teaching profession within five years (Feistritzer, 1999).

An alternative certification program was established in Texas as a result of a critical shortage of certified teachers of driver education (Ashley, 1995). As the teacher shortage escalated, so did the alternative licensure programs. More than 125,000 teachers have been certified or licensed through alternative routes. In 1998–99, 24,000 teachers were certified or licensed through alternative licensure in 28 states (Feistritzer and Chester, 2000). No matter how many teachers are being prepared, however, there will still be a shortage.

The practice of allowing individuals without professional training to teach does not go unchallenged, but local districts cannot leave teaching vacancies unfilled. There seems to be general public interest in allowing people to teach when they are perceived to have content knowledge and related work experience. School board members and administrators tend to support alternative routes to teaching, and it appears that business and political leaders try to influence the supply, quality, and performance of public school teachers as a strategy for restoring the quality of education and the economic well-being of the country (MacPhail-Wilcox & King, 1988).

COMPARISONS OF ALTERNATIVELY CERTIFIED AND TRADITIONALLY PREPARED TEACHERS

Alternative programs attract large numbers of candidates. College graduates with degrees outside education who become interested in teaching are more likely to be older, male, or a minority than traditional candidates (Bradshaw & Hawk, 1996). The minority candidates often bring varied work experience from other fields.

Yet, there is not enough research available to determine whether alternative certification is viable. Currently there are

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two sides of the debate: one side thinks it is the solution to America's teacher shortage while the other side believes it may be just a "quick fix" (Appel, 1985). Many adults want to become teachers, but the state must have information about their background, their educational level, their attitudes, and their previous experiences (Feistritzer, 1998).

Newman and Thomas (1999) examined several important issues regarding alternative certification. Questions addressed included "Who would teach pedagogy?" and "Would alternative certification programs be 'an assault on education as a field of university study?'" Newman and Thomas discussed in their article that America needs to strengthen its education programs and not dilute them. Evertson, Hawley, and Zlontik (1985) concluded, "Teachers who participate in preservice teacher preparation programs are more likely to be more effective than teachers who would have little or no formal training." They also concluded that these teachers would lack the following:

1. Completion of a liberal arts undergraduate education.
2. Competence in the subject being taught as measured by the equivalence by a major.
3. Completion of eight to ten courses plus a related practicum to be taken before or after graduation.
4. A year-long internship in a "teaching school," analogous to a physician's internship.
5. A one- or two-year induction period with specific characteristics.
6. Ongoing individualized professional development.

Other comparisons between alternative candidates and traditionally prepared teachers showed few differences between the two groups. In fact, quantitative data seem to support arguments that alternative routes are attracting candidates at least equal in quality to graduates of teacher preparation programs. Test scores and grade point averages of alternative candidates tend to be strong (Bradshaw & Hawk, 1996). Performance appraisal data are mixed, but observed differences in evaluation ratings are often small, and performance ratings for alternative candidates are generally adequate. Adelman, Bogart, and Michie (1986) are among those who have noted differences in the area of classroom management. There is a tendency for the performance of alternative candidates to improve over time, and Rosenberg and Rock (1994) found that differences disappeared by the end of the first year of teaching. Studies comparing the performance of the students of teachers with different preparation have also yielded mixed results. Stafford and Barrow (1994) found that observed differences seemed more related to teaching experience than type of teacher preparation. Yet, qualitative studies support concerns that teachers without professional training may not have sufficient understanding of curriculum, student ability, and the motivation to plan and organize instruction effectively (Bradshaw & Hawk, 1996). For example, Clarridge (1990) found that alternative candidates were less able to maintain student time-on-task, provide instructional feedback, assess student performance, and present subject matter effectively.

Studies comparing the classrooms of traditionally and alternatively prepared teachers also report mixed results. According to Knight, Owens, and Waxman (1991), alternatively prepared teachers provide fewer opportunities for students to engage in higher-level thinking, and more friction is likely among their students. On a positive note, however, Stoddart (1993) reported that alternatively prepared teachers communicated higher expectations of low income and minority students. According to Stoddart, alternatively prepared teachers are less likely to rely on drill and practice, and they make more effort to develop instructional practices that are responsive to the needs of diverse learners. Those behaviors are congruent with many school strategies to improve the performance of all students.

These results suggest that while alternative candidates tend to demonstrate strong content knowledge, they may experience more difficulty with pedagogical content knowledge, the base of theory and research that informs the way content is presented in the classroom so that students will be able to understand and use it. Alternative candidates must learn immediately to survive in their classrooms, and we cannot assume that the necessary learning will occur automatically.

THE ECONOMIC CONTEXT FOR ALTERNATIVE ROUTES TO TEACHING

Human Capital Theory provides a lens for examining interest in and results of alternative teacher certification programs for college graduates who did not choose a traditional teacher preparation program. Schultz (1971) proposed that skills and knowledge, acquired as a result of deliberate investment in education, are a specific form of "human capital" that is important in economic development. Individuals increase their "stock" of human capital through formal schooling, formal vocational education, and on-the-job training or staff development. At any given time, the value of someone's stock of human capital "depends on whether it has been properly used, on its age, on the depreciation and obsolescence it has been subject to, and on the extent to which it contains misdistributions for reasons of supply and demand" (Schultz, 1970, pp. 35–36). Further, Schultz advocated that people invest in themselves through education to have more choices, higher earnings, and greater satisfactions. Those investments can be expensive. If the economy and employment conditions change, movement from one career to another is common and long-term returns on investments in human capital are difficult to project. Under those conditions, Schultz (1971) suggests, "Staying with general education longer than would be warranted if there were no uncertainty with respect to future earnings from investment in education" (p. 168).

Individuals who entered the teacher labor market had unique sets of inherited attributes and acquired knowledge and skills. Evidence that the teacher labor market continues to decline in size and quality has been explained in different ways, and proposed solutions vary (Darling-Hammond, 1990). Weaver (1981) argued that lowered standards for entry into traditional teacher education, a response to shrinking enrollments, were responsible for the declining quality of the

teacher labor pool. Schlechty and Vance (1981, 1983) felt that teaching was no longer an attractive career choice for talented individuals, and Levin (1985) pointed to the single salary schedule that failed to recognize each teacher's unique stock of human capital and its value in the labor market.

Human Capital Theory provides another possible explanation for the decline in quality of the teacher labor pool. It appears that individuals who complete a liberal arts education before pursuing teacher education may possess more human capital than those who pursued specialized undergraduate teacher education. Thus, liberal arts graduates pursue a broader course of study that could facilitate their career mobility over a lifetime. Both groups, graduates of traditional teacher preparation programs and graduates of liberal arts programs, invest in four years of education to increase their stock of human capital. Both groups expect future choices, earnings, and satisfactions. Both groups incur educational costs and lost earnings as a function of the time outside the labor market while they were enrolled in their undergraduate programs. If one program is more interesting or satisfying than the other, those costs or rewards merit consideration.

Teacher education graduates have pursued a specialized course of study designed to develop professional knowledge and skills that they expect to be valued and rewarded in their chosen profession. In contrast, liberal arts graduates have added to their stock of human capital the value of extended general education. If financial rewards are identical for both groups, the traditionally prepared teachers' specialized stock of professional training and skill has not been recognized.

With its government subsidies, education is not an open market, and its monetary benefits are relatively low. Teacher salary levels are likely to be influenced more by fluctuations in student populations, the state legislature's sense of teachers' worth, and the program priorities within each state than by supply and demand forces (Anthony, 1987, p. 12). In such a depressed market, human capital theorists predict that simply opening alternative routes to teacher certification will not improve the quality of the teacher labor pool. Not only will the specialized stock of human capital inherent in teacher education programs be less valuable, but also the low, undifferentiated salaries may fail to attract higher quality labor. In fact, Grissmer and Kirby (1997) noted that differentiation of teacher salaries by years of experience and degrees held, without regard to quality,

> Robs the profession of an enlarged pool of high-quality entrants, the opportunity for a more rigorous course of study, a higher proportion of higher-quality teachers within the profession, and a more equitable distribution of high-quality teachers across school districts (p. 54).

However, if other job markets are depressed and non-traditionally prepared personnel are allowed to enter the teaching profession at less cost, then allowing teacher candidates to bypass the professional preparation program should increase the size of the teacher labor pool. There could be a similar effect if alternative candidates perceive the intrinsic rewards of teaching as a career to be high. If it is true that liberal arts graduates are more "able" as a group than those who choose teaching (Darling-Hammond, 1990; Schlechty & Vance, 1981; Vance, 1981; Weaver, 1981), it follows that the quality of the teacher labor pool will be increased as well.

THE PRACTICE OF ALTERNATIVE LICENSURE/CERTIFICATION

Alternative licensure/certification is definitely on the rise, as legislatures in 14 states are considering such legislation. Forty states have an alternative teacher licensure or certification program (Feistritzer and Chester, 2000). The question is, "What are the requirements for these alternative licensed or certified teachers?" The National Center for Educational Information (NCEI) identified 12 states that have exemplary alternative teacher certification routes. These states' programs had to meet the following criteria:

- The program has been specifically designed to recruit, prepare, and license talented individuals for teaching who already have at least a bachelor's degree.
- Candidates for these programs pass a rigorous screening process, such as tests, interviews, and demonstrated mastery of content.
- The programs are field based.
- The programs include coursework or equivalent experiences in professional education studies before and while teaching.
- Candidates for teaching work closely with trained mentor teachers.
- Candidates must meet high performance standards for completion of the programs.

The 12 states that have met these criteria are: Arkansas, California, Colorado, Connecticut, Delaware, Illinois, Kentucky, Maryland, New Jersey, New Mexico, Pennsylvania, and Texas (Feistritzer & Chester, 2000). Yet, Feistritzer (1999) describes the components of an effective alternative teacher licensure or certification program as follows.

- A strong academic coursework component.
- They are field-based programs, meaning that the individuals get into the classrooms early in their training.
- Teacher candidates work with a qualified mentor teacher.
- Most of these programs are collaborative efforts among state departments of education whose responsibility it is to license teachers, colleges and universities that historically have had the responsibility for educating and training teachers, and school districts who actually hire teachers (Feistritzer, 1999).

Yet, Kentucky's alternative certification programs requires the following from its applicants seeking alternative teacher licensure or certification:

- 10 years of exceptional experience.
- A bachelor's degree with a minimum 2.5 GPA.
- Successful completion of classroom internship.
- Passing whatever teachers' exam is set as criteria.
- Packet from local school district showing the Standards Board why the candidate is qualified to become a full-time teacher (Blackford, 1998).

Alternative certification is not a new concept and has

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been broadly defined as a method of entry into the teaching profession that does not require completion of a traditional teacher education program. The basic requirement of a four-year degree represents a return to a minimum standard for teacher certification that evolved in the mid-1900s and suggests that additional requirements such as testing and program approval have not been widely perceived as improvements (Descamps & Klingstedt, 1985). Clark and McNergney (1990) reported an interesting level of uniformity in certification standards nationally, even though the roles of state education agencies and teacher education programs in determining certification requirements have varied by state and over time. Furthermore, Clark and McNergney indicated differences of opinion about the place of professional training within the four-year degree program persist. Alternative certification is a national issue that continues to be addressed separately but similarly by each state.

What forms does alternative certification take? Some alternative certification programs are no more than provisions for emergency or provisional certification; however, other alternative licensure or certification programs provide training for liberal arts graduates who wish to teach and earn standard certification. Alternative certification programs differ from traditional teacher preparation programs in the nature and length of the professional training component (Roth, 1986). Compared to traditional teacher preparation programs, alternative programs appeal to a different target audience. Ideally, those alternative programs strive for similar levels of "content, rigor, and expected outcomes" (Smith, Nystrand, & Carlson, 1985, p. 1). In fact, the AACTE (1989) advocated an extensive selection process and the same testing and content requirements for alternatively and traditionally licensed or certified teachers.

A recent directory of post baccalaureate programs for individuals interested in alternative paths to teaching described 328 different programs representing all 50 states (AACTE, 1996). Generally, there were three broad categories of alternative certification programs: (a) some are linked to graduate study and internships; (b) others provided some professional education before classroom teaching begins; and (c) a few allowed candidates to assume teaching responsibilities without any preparation. The local school system, a teacher education program, or the state agency maintained responsibility for the professional training of program participants and for the eventual recommendation for certification. In some cases, responsibilities were shared collaboratively.

Who should teach? In the United States, the tradition of local control over the hiring of teachers continues to be strong. The centralization of licensure or certification at the state level has increasingly restricted the pool of teaching candidates, but flexibility enabling school officials to meet local staffing needs has been retained. Some flexibility is needed to respond to local diversity in teacher labor markets (Berry & Hare, 1985), but the effects of that flexibility has been and continues to be both positive and negative. Schlecter (1987) observed that alternative licensure or certification policies were increasingly used by choice rather than to address shortages. While large segments of the American public might benefit from maintaining an open route into teaching for college graduates (Haberman, 1986), some alternative programs have appeared to be "dedicated essentially to circumventing the professional educational and certification establishment by deregulating access to teaching positions" (Sedlak, 1989, p. 257). Stoddart and Floden (1995) noted an important distinction between current alternative route programs and earlier emergency provisions that allowed local districts to respond to shortages. Current programs have allowed candidates to earn a permanent teaching license without traditional college-based teacher education. "What began as a short-term measure to deal with teacher shortages is now becoming an institutionalized alternative to college-based education" (Stoddart & Floden, 1995, p. 1).

Warren (1989) observed that teachers have an "uncertain status as both objects and instruments of reform" (p. 2). Thus, considerable support has existed for the view that traditional teacher education is of questionable value (Feistritzer & Chester, 1996; Sedlak, 1989; Uhler, 1987), while business and political leaders continue to believe "that if they could influence the supply, quality, and performance of public school teachers, both the quality of education and the economic well-being of the country could be restored" (MacPhail-Wilcox & King, 1988, p. 100). From a national perspective, alternative certification has been seen as a strategy for minority recruitment, a way to attract teachers in math and science, and a means of guaranteeing to schools and communities the flexibility needed to build the teacher labor pool (Cross, 1989). Stoddart and Floden (1995) observed that if "knowing one's subject is a sufficient qualification to begin teaching," (p. 6) it becomes easier for the general public to sanction the hiring of teachers without professional preparation who can pass a subject matter exam.

THE CURRENT STATUS OF ALTERNATIVE CERTIFICATION

According to the annual report of the National Center for Education Information, there are increasing numbers of alternative routes for preparing and certifying teachers. Forty-one states and the District of Columbia are implementing alternative certification, and all states have some type of program other than the traditional approved teacher education program route to licensure. Twenty-three states and the District of Columbia use alternative programs to attract talented individuals with undergraduate degrees in fields outside education to teaching. There are increasing numbers of college and university alternative programs, in addition to those operated by the states. Twenty-four states indicate an increase in legislative interest in alternative programs, and 25 states report increases in the number of candidates licensed to teach through alternative routes in the last five years (Feistritzer, 1997).

Alternative programs continue to vary in content, length, location, testing and other requirements for licensure. Stoddart and Floden (1995) suggested the following critical choices: (a) when to provide professional training, (b)

whether or not to provide professional training in the schools or in the college classroom, (c) the content to be taught and the role of higher education in program development and implementation, and (d) the balance between formal course work and supervised field experiences. Yet, among the typical, but not universal, requirements for entry into alternative programs are a four-year degree, a required grade-point average, and demonstrated content knowledge, ranging from documented experience or competence to a degree in the teaching area. Many programs are likely to be linked to an induction program. Some states require at least one standardized test, but the timing and the content of the test vary. Training prior to entering the classroom is a requirement in some states, ranging from "some training" to a specified number of credit hours. Unfortunately, even when training or orientation is required prior to the beginning of classroom teaching, it may not occur (Hawk and Schmidt, 1990).

Alternative licensure or certification continues to provide less costly ways for people to become teachers throughout adulthood, and it allows a broader range of people to enter teaching (Zumwalt, 1996). Feistritzer (1997) estimated that over 75,000 people have been licensed to teach through state alternative programs in addition to thousands more who are being licensed to teach through college and university alternative programs.

THE EFFECTIVENESS OF ALTERNATIVE CERTIFICATION PROGRAMS

Alternative certification programs allow individuals to enter the teaching profession with different stocks of human capital resulting from their investments in either a liberal arts or a traditional teacher education program. Comparisons of traditionally prepared teachers with those who become teachers without completing an undergraduate teacher education program have come largely from evaluations of alternative programs around the country. Early efforts to evaluate or predict the success of alternative certification policies that gained momentum in the late 1980s drew heavily upon the teacher education research of the 1960s, suggesting that interest in this issue is highest during periods of teacher shortage when entry into the profession is more open (Evertson, Hawley, & Zlotnik, 1985; Ashton, Crocker, & Olejnik, 1987). Both reviews found some evidence to support the need for professional training, but the issue continues to be confused by varied interpretations of "provisional" licensure or certification. Evertson, Hawley, and Zlotnik (1985) report teachers with professional training are more likely to be, or to be perceived as, more effective than those without formal training, and Ashton, Crocker, and Olejnik (1987) indicate consistent small differences favoring regularly certified teachers. However, both sets of authors have a concern about the quality of the research.

Alternative certification policies have increased the size of the teacher labor pool, and interest and participation in alternative certification programs has been strong and continues to grow. Nationally, the NCEI data (Feistritzer, 1997) have indicated increased numbers of reported state alternative programs, college and university alternative programs, and nontraditional teaching licensure or certificates. States and teacher education programs report an increasing number of inquiries about alternative routes, applications to alternative programs, and program participants as well as the involvement of more school systems (Hutton, 1987; Schechter, 1987; Wale & Irons, 1990), and growing numbers of alternative certification programs have been and continue to be developed by colleges and universities (Feistritzer, 1997). Alternative certification policies also have allowed school districts to expand the size of the local teacher labor pool. Three strategies identified by Eubanks (1996) used by urban districts were: (a) offering alternative certification programs through colleges or unions (53.5 %); (b) allowing non-certified teachers to teach through emergency licensure, long-term substituting, provisional licenses, internships, or apprenticeships (76.9%); and (c) preparing teacher assistants for licensure (43.6%). As alternative routes into teaching have expanded the teacher labor pool, they have attracted college graduates with degrees outside education. Alternative candidates have tended to be older than traditional candidates, and they were more likely to be male or minority (Bradshaw & Hawk, 1996). Further, they often have brought experience from careers outside education.

In summary, the research base comparing the quality of an alternatively and a traditionally certified teacher is not large. The available studies tend to evaluate state programs or compare groups of teachers participating in specific programs. Synthesis of results is difficult because of differences in types of certification and the variation in quality and length of professional training provided to the groups being compared. The tendency for current studies to find few or mixed differences among traditionally and alternatively certified teachers appears to support arguments that alternative certification programs are attracting candidates at least equal in quality to graduates of traditional teacher preparation programs and that these programs are preparing needed teachers in an innovative and cost-effective way. Selection criteria for admission to alternative programs and the content, length, and method of delivery of training for alternative candidates before they enter the classroom could explain some of the apparent success. Further study is urgently needed, and Zumwalt (1996) suggested that the most important finding of the mixed research results to date "may be that the recruitment, preparation, and retention of teachers is much more complex than originally thought by policymakers" (p. 41).

PURPOSE

The purpose of this study was to identify how alternative licensure/certification of business teachers is accomplished, what professional preparation elements are delivered and required, and to form a base line of data about alternative licensure/certification for business teachers. The survey asked 10 questions and, depending on the response to Question 10, respondents answered three additional questions.

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METHODOLOGY

To obtain data to determine the alternative licensure requirements for business educators in the United States of America, survey research methodology was used. According to Dillman (1978), survey research methodology is appropriate when dealing with quantitative data, controlling costs of conducting research, and including a large portion of the population in the sample or participants selected. Thus, survey research was deemed the best approach to collect data concerning alternative licensure in business education from each of the 50 states.

INSTRUMENTATION

The questionnaire, *Alternative Licensure Information Request—Business Education (ALIBE)*, was used in this study and was adapted from an instrument developed by Richerson et al. (1999). Permission was secured from the instrument authors to alter the wording to reflect business education alternative licensure requirements. After the wording of the instrument was revised, it was finalized in order that the questionnaire would appear in an op scan format. In generating the ALIBE, necessary competencies, skills, and requirements needed by business education teachers were reviewed through the policy and position papers issued by a number of government and educational organizations. From the list of competencies identified, an instrument, the ALIBE, was designed to determine the alternative licensure requirements of each of the 50 states and related territories.

The two-page instrument was designed to have a business education consultant from each of the state departments of public instruction indicate each state's requirements for alternative licensed business education teachers. Statements concerning the requirements of alternatively licensed business education were generated from the review of current literature concerning teacher licensure; these statements addressed not only academic concerns but also trends and issues regarding the status of alternative teacher education licensure within each state. Additional information about the future of alternative teacher licensure was also solicited.

RELIABILITY AND VALIDITY

After the ALIBE had been developed, three individuals who were perceived as experts in teacher licensure or survey research methodology reviewed the instrument. Further, these individuals indicated that the instrument was designed to obtain the data needed to ascertain alternative licensure requirements for business educators—the instrument was valid. After the experts certified its validity, the instrument in op scan format was administered to 25 individuals who were employed in teacher education licensure. The instrument included 13 items organized into four subscales. Based on the results of the pilot study, the following coefficients of internal consistency (Cronbach's alpha) were determined: (1) enrollment trends =.84; (2) demographics of business education alternatively licensed teachers = .74, (3) professional preparation of alternatively licensed business education teachers = .83; and (4) required content or competencies for alternatively licensed teachers in business education = .78. According to Cronbach (1951), coefficients above 0.6 are desirable and values above 0.8 are needed for a developed scale. Therefore, the coefficients calculated for each section of the instrument were above the value needed.

PROCEDURES

Upon receipt of the reliability and validity certification, surveys were addressed to business education consultants employed by state departments of public education in the United States of America and its territories (a total of 53 surveys were sent). The names of business education consultants were obtained from the Directory of Business Education Personnel published in the December 1999 *Business Education Forum*. Approximately two weeks after the initial mailing, a follow-up mailing went to those not responding to the first mailing. A telephone call was placed to the business education consultants who had not forwarded a completed instrument within two weeks after the second mailing. From the 53 instruments mailed, 32 completed and usable instruments were received. This represented a 60% response rate. According to Wunsch (1986), a 60% survey return rate constituted a representative response.

FINDINGS

RQ 1: Does your state have specific requirements for initial certification/licensure of business education teachers who have previously completed an undergraduate non-teaching degree? The results indicate that 80% (n=26) of states/provinces do have specific initial certification/licensure requirements for business educators whereas 20% (n=6) do not.

RQ 2: For which teaching areas or levels do you presently license business education teachers? (Mark all that apply). The results, as reported in Table 1, indicate that while several states license business teachers at the junior high level and above, few states license business teachers below the junior high school level.

Table 1. Teaching Areas or Levels at Which States License Business Education Teachers

Area or Level	n	%
Elementary	0	0
Junior high/middle school	0	0
Postsecondary	0	0
High school and postsecondary	3	10
All teaching levels	3	10
Junior high, high school, and postsecondary	5	15
High school	5	15
Junior high and high school	11	35
No response	5	15

RQ 3 and 4: Approximately how many alternative licensure students are enrolled in teacher education programs in your state? Approximately how many alternative licensure business education students are currently teaching in your state's public schools? The results as illustrated in Table 2, indicate that the same number (n=25, 80%) of students and current teachers are pursuing teacher education via the alternative route.

Table 2. Number of Alternative Licensure Students and Active Teachers

Number	Alternative Licensure Students N (%)	Alternative Licensure Teachers N (%)
0–49	25 (80%)	25 (80%)
50–99	3 (10%)	2 (5%)
100–199	2 (5%)	2 (5%)
200 or greater	2 (5%)	3 (10%)

RQ 5: Have enrollment trends in your state's business education teacher preparation program increased or decreased over the last two years (1998-2000)? As Table 3 illustrates, 65% indicated a decrease in enrollments while 30% indicated no change.

Table 3. Enrollment Trends Over the Past Two Years (1998–2000)

Enrollment Trends	N (%)
Increased	2 (5%)
Decreased	21 (65%)
Neutral/no change	9 (30%)

RQ 6: How many (semester) credit hours of professional or teacher education courses (excluding technical coursework) are currently required for alternative licensure students in your state to become certified to teach business education courses? As Table 4 illustrates, one-fourth of the respondents indicated 6-14 credit hours were needed while 20% indicated 23-39 credit hours were needed.

Table 4. Semester Credit Hours of Professional Teacher Education Courses Required

Credit Hours	N (%)
6–14	8 (25%)
15–23	5 (15%)
23–31	6 (20%)
31–39	6 (20%)
40 or more	2 (5%)
No response	5 (15%)

RQ 7: How are each of the following typical teacher professional preparation elements currently delivered to alternative licensure business education students in your state, if required? The elements listed included instructional methods, curriculum, issues/trends in business education, foundations of business education, instructing special needs learners, discipline and classroom management, laboratory management (computer laboratories), educational/instructional technology (multimedia), and field experiences (internships/student teaching). Results of the responses are indicated in Table 5.

RQ 8: Based on your state's licensure/certification requirements, are the following courses required, recommended, or not applicable? As Table 6 illustrates, 45% of the respondents indicated that Issues/Trends in Business Education and Foundation of Business Education was not applicable, respectively, while 45% recommended instructing special needs learners and 50% recommended laboratory management (computer laboratories). Fifty percent or more of the respondents required the remaining five areas.

RQ 9: What changes would you recommend to ensure the success of alternative licensure business education teachers in your state? The following narrative, verbatim responses were provided:

- More access for instruction.
- Break down barriers of timeframe—shorten courses.
- It's not going to happen in [state].
- Rebuild teacher prep.
- All that is recommended for [the 8 items listed] be required.
- Alternative certification is relatively new. We do not know its full impact yet.
- Alternatively certified be held to same professional development as regular certified.
- A subject matter focus for professional preparation elements.
- We recommend that our State University of [name] re-establish a former program for certification of all Career and Technical Education teachers who are not certified.
- Improved communication between alternative route teachers/postsecondary institutions/district schools/State Dept. of Education.

RQ 10: Do you currently have a specific program for initial certification of students who have previously completed a bachelor's degree in business? Forty-five percent (n=14) indicated "yes" while 50% (n=16) indicated 'no," and 5% (2) did not respond. If the respondent answered "yes," three additional questions were asked and answered.

RQ 10a: Do your students attempting to get initial licensure/certification at the graduate level have to take additional undergraduate work or prerequisite courses? Forty-five percent (n=14) indicated "yes" while only 15% (n=5) indicated "no," and 40% (14) indicated it was "not applicable."

RQ 10b: Do all of your students seeking initial licensure/certification student teach? Forty-five percent (n=14) indicated "yes" while 15% (n=5) indicated "no." Forty percent (n=13) indicated "not applicable."

RQ 10c: Can your graduate students seeking initial licensure/certification get graduate credit for student teaching hours? Forty-five percent (n=14) indicated "not applicable," while 40% (n=13) indicated "no," and 15% (n=5) indicated "yes."

RQ 11: Provide recommendations for specific professional education coursework. From a list of nine items, 65% (n=21) of the respondents recommended the following professional education coursework with the number of semester hours (s.h.):

- Foundations of American Education (3 s.h)
- Foundations of School Learning, Motivation, and Assessment (Educational Psychology) (3 s.h.)
- Teaching Reading in the Content Area (2 s.h.)
- Exceptional Students in the Regular Classroom (2 s.h.)

Table 5. Delivery Methods of Teacher Professional Preparation Curricular Elements

Response	Instructional Methods N (%)	Curriculum N (%)	Issues/ Trends in Business Education N (%)	Foundations of Business Education N (%)	Instructing Special Needs Learners N (%)	Discipline and Classroom Management N (%)	Laboratory Management (Computer) N (%)	Educational/ Instructional Technology (Multimedia) N (%)	Field Experiences (Internships/ Student Teaching) N (%)
Exclusively with technical students from one area	11 (35%)	8 (25%)	10 (35%)	12 (40%)	2 (5%)	3 (10%)	5 (15%)	3 (10%)	10 (35%)
Integrated with students from multiple technical areas	7 (25%)	9 (30%)	5 (15%)	5 (15%)	8 (25%)	8 (25%)	8 (25%)	11 (35%)	5 (15%)
Integrated with students from all secondary disciplines and technical areas	3 (10%)	3 (10%)	2 (5%)	2 (5%)	10 (35%)	9 (30%)	3 (10%)	6 (20%)	5 (15%)
Integrated with students from all elementary, middle, and secondary disciplines and technical areas	2 (5%)	2 (5%)	2 (5%)	2 (5%)	2 (5%)	3 (10%)	5 (15%)	3 (10%)	2 (5%)
Private learning	2 (5%)	2 (5%)	0 (0%)	0 (0%)	2 (5%)	2 (5%)	3 (10%)	2 (5%)	2 (5%)
Distance education	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Not applicable	5 (15%)	6 (20%)	11 (35%)	9 (30%)	6 (20%)	5 (15%)	8 (25%)	5 (15%)	6 (20%)
No response	2 (5%)	2 (5%)	2 (5%)	2 (5%)	2 (5%)	2 (5%)	—	2 (5%)	2 (5%)

Table 6. Course Requirements for Licensure/Certification

Course	Required N (%)	Recommended N (%)	Not Applicable N (%)
Instructional methods	24 (75%)	3 (10%)	5 (15%)
Curriculum	21 (65%)	6 (20%)	5 (15%)
Issues/trends in business education	8 (25%)	10 (30%)	14 (45%)
Foundations of business education	10 (30%)	8 (25%)	14 (45%)
Instructing special needs learners	13 (40%)	14 (45%)	5 (15%)
Discipline and classroom management	16 (50%)	11 (35%)	5 (15%)
Laboratory management (computer laboratories)	7 (20%)	16 (50%)	9 (25%)
Educational/instructional technology	19 (60%)	8 (25%)	5 (15%)
Field experiences (internships/student teaching)	22 (70%)	4 (10%)	6 (20%)

RECOMMENDATIONS AND IMPLICATIONS

Based upon their leadership roles in business teacher education, NABTE members are recognized as the leaders in business teacher education. And as such, NABTE members accept the challenges facing the business teacher shortage. Therefore, it is recommended that:

1. NABTE institutional representative and business teacher educators/business education state supervisors and state teacher licensure/certification personnel work collaboratively to increase the number of licensed business teachers to meet the business teacher shortages in middle/junior and high schools.
2. The majority of licensed/certified business teachers at middle/junior high and high schools should be prepared at NABTE institutions through traditional four-year business teacher education programs.
3. NABTE institutional representatives and business teacher educators should take a lead role in the development and maintenance of both high quality traditional business teacher education programs and business education alternative licensure/certification programs.
4. NABTE institutional representatives and business teacher educators follow the Model for Alternative Licensure/Certification for Business Teachers (2000).
5. NABTE institutional representatives and business teacher educators provide the following for the nontraditional and alternative licensure/certifcation: (1) professional education course work, (2) business teaching methods content, (3) and specific business subject matter for alternative licensure/certification purposes. This course work should be from various nontraditional delivery methods, such as short courses, intense summer seminars, correspondent courses, weekend workshops, online courses, and others.

6. NABTE institutional representatives and business teacher educators communicate a model for alternative licensure/certification to the state's licensure/certification personnel, state specialists, and other stakeholders, including each state's business education association president.

Traditional business teacher education programs are currently in place. Accordingly, it is recommended that those seeking a teaching career in business education attend a college or university that has a NABTE institutional membership. NABTE business teacher educators are prepared to assist state personnel with an alternative licensure/certification program. Therefore, NABTE members need to work to provide a model for alternative licensure/certification for business teachers.

It is recommended that NABTE members offer courses in a variety of delivery methods and schedules to support a model for alternative licensure/certification for business teachers. It is recommended that these courses be offered in a variety of offerings, such as weekend workshops, intense summer seminars, online classes, and correspondent courses.

It is recommended that NABTE members communicate with all stakeholders who can help solve the business teacher education shortage. These include state specialists, teachers, state licensure/certification personnel, officers in state business education associations, and others. Cooperatively these stakeholders can solve the business teacher shortage.

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Competencies Required in the 21st Century of Entry-Level Fortune 500 Employees With Four-Year Business Degrees

Sheila C. Porterfield, Jackson State University, Jackson, Mississippi
Connie M. Forde, Mississippi State University, Mississippi State, Mississippi

ABSTRACT

The purpose of this study was to investigate the specific competencies and skills that human resource directors in U.S. Fortune 500 companies believe that entry-level business employees with a four-year business degree should possess in the 21st century (the year 2001 and beyond). The findings from the study will assist in closing the educational skills gap. The research should prompt business school administrators and faculty to evaluate programs in efforts to determine whether business curricula embody the education and training that will assist in the development of 21st century competencies and skills. The study utilized the descriptive research design. The data for this study was collected using a questionnaire developed by the researcher. A pilot study was conducted to aid in establishing validity and reliability. Descriptive statistics were used to analyze research questions. The results of the study indicated that the competencies and skills that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the year 2001 and beyond include basic skills, thinking skills, personal qualities, resources (competencies), interpersonal skills, information competencies, systems (competencies), applying technology to task, business etiquette, corporate entrepreneurship (intrapreneurship), professionalism, and personal wellness.

According to Herman (1995), the quote "Those who do not prepare for the future are destined to be its victims" (p. 1) has been passed down through many centuries. Those individuals who heeded the warning of the message survived and prospered during changing times while those who refused to take the advice of the message became victims of their own carelessness. This quote holds special meaning for business schools as the business world moves closer to the 21st century (year 2001 and beyond). A new work world is demanding changes that have already surfaced as the last decade ended. Additional changes are expected upon and within the 21st century. For example, Schermerhorn (1993) projected that the 21st century workplace will include an intense level of competition, continued globalization of markets and business activities, and more accelerated changes in technology. The workplace will also be characterized by high performance and expectations. In order to survive, entry-level, four-year degreed employees must have mastered fundamental skills and competencies and must be able to grow with their hiring companies. Indeed, the time has come for business schools and business school students to heed the warning of change.

In as much as the business world is undergoing massive changes, several critical issues must be addressed if all the participants are to make a smooth transition into the new workplace. One such issue pertains to fundamental workplace competencies and skills. Businesses are requiring that entry-level, degreed employees have sufficient competencies and skills upon entering the workplace. The value of fundamental skills and competencies cannot be overstated at this time. Skills and competencies must be acquired and updated in order to keep pace with changing times, changing technology, and changing competition. Barrett (1998) stated that a skilled workforce is the most important resource of almost any American business. Barker (1997) reported that Bill Gates, head of a Fortune 500 organization, has said on occasion that the only security his employees have is their skills, and he supports their education to maintain and improve those skills. In view of such convictions, business school administrators and educators should be compelled to embrace the changes that are occurring in efforts to better prepare young, future-minded postsecondary students for business careers in the year 2001 and beyond.

American business schools on the average have come under fire in recent years for not producing a truly qualified product for business and industry. Aupperle & West (1996) emphasized that business schools have been reported as producing students who are poorly trained for meaningful contributions and for long-term survival in any business organization. Dulek and Fielden (1992) speculated on the notion of whether many business schools were giving more attention to their MBA programs at the cost of quality undergraduate programs.

In addition, the one major force affecting business schools is the AACSB – The International Association for Management Education, formerly the American Assembly of Collegiate Schools of Business. The AACSB is considered the premier accrediting agency for business school programs at all levels. Elliot, Goodwin, and Goodwin (1994) believe that the process of seeking accreditation and recognition via the older, unitary AACSB standards is perhaps what has caused business

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schools at all levels to pursue theoretic and basic research at the expense of more applied studies. In 1991, the AACSB developed mission-linked accreditation standards and a peer review process for business schools that sought accreditation and/or reaffirmation (AACSB Brochure, 1997). Jantzen and Pendleton (1994) reported that business schools may now emphasize teaching and applied research under the new set of standards.

As the workplace has already begun to change, employers are constantly reporting that they are encountering difficulties in hiring entry-level workers with competitive skills (Bassi, Cappelli, Katz, Knoke, Osterman, & Useem, 1997). Bassi, et al. (1997) provided an adequate description of how the research problem is most likely surfacing. They reported that most business employers are likely to report in surveys that deficiencies in computational and problem-solving skills are among the most serious deficiencies. Furthermore, inadequate writing and verbal skills likewise pose a problem. In addition, studies tend to show that deficiencies in interpersonal skills and poor attitudes toward work and/or an "inability to fit in" (p. 157) are important deficits among entry-level applicants.

Additionally, the Secretary's Commission on Achieving Necessary Skills of the U.S. Department of Labor initiated a 1990 report entitled "What Work Requires of Schools: A SCANS Report for America 2000" (U.S. Department of Labor, 1991) which stated that more than 80% of employers found that it was difficult to find workers who possessed a good work ethic, an appropriate social behavior, a reliable nature, a good attitude, a pleasant appearance, and a good personality.

Some corporations have reported that business graduates are technically competent but lack human relations and leadership skills (Levenburg, 1996; see also Ettorre, 1994). Losyk (1996) described the problem in his book, *Managing a Changing Workforce: Achieving Outstanding Service with Today's Employees*, through quotes that were made by actual employers. One such quote was "The people coming out of school are computer whizzes, but they just don't have the analytical skills that we need in today's high tech environment, and they don't have the interpersonal skills we need for communicating with our customers" (pp. 7-8). The feelings that are communicated in this quote are indicative of the way many of the nation's employers are feeling today about their prospective employees for the 21st century.

Several individuals have conducted studies that highlight discrepancies between practitioners and business school faculty. One such individual, Levenburg (1996), completed a study designed to determine whether differences existed between what practitioners and business production and operations management faculty deemed to be general management skills and abilities. Levenburg (1996) concluded that significant differences existed between the perceptions of practitioners and professors.

Aupperle & West (1996) stated that in view of the complaints against collegiate business schools, some businesses that normally hire business school graduates may begin looking at two-year degreed liberal arts colleges for qualified entry-level employees. Community colleges are beginning to offer occupation-specific programs that provide technical skills and practical experience with a guarantee to the students that they will have a job upon completion of the program (Aupperle & West, 1996).

If change is to occur in the business curricula, business school leaders must believe that such change is needed. They must initiate and communicate such a vision and then develop commitment and cooperation in making the desired changes. They must do this with a sense of urgency and must develop an action plan (Graves & Snyder, 1994). Business school administrators and faculty must realize that if their students are to succeed in the 21st century work world, they must ensure that their schools are equipped to meet the changing and challenging work environment. Brown, Hammond, and Hartman (1996) stated that in order to compete, business graduates must possess the skills that are to be applied in the business environment. Consequently, if business graduates are to succeed in the 21st century, business school administrators and faculty ought to develop a full understanding of the kind of competencies and skills American businesses will expect their valued entry-level employees to possess. By developing a discerning knowledge of the competency requirements of 21st century, business organizations, business school administrators, and faculty will have updated information on which to base program and curricula evaluations. Armed with such up-to-date information, business school officials will be in a position to make necessary curricula changes in efforts to continue to be responsible in their academic endeavors of preparing students for the new workplace (Haff & Herrin, 1997). Not doing so might cause their students to get left behind. Further, not doing so might cause the demise of some of America's business schools.

SIGNIFICANCE OF THE STUDY

A research study designed to determine the competencies and skills for entry-level four-year degreed business employees in the 21st century is needed for a number of reasons. The study helps to provide a voice to the desires of business organizations as it relates to the educational preparation of business students. Additionally, deficiencies exist in the current literature regarding competencies and skills. Much of the literature available on competencies and skills is centered around specific business disciplines producing abbreviated listings and not on comprehensive skills and competencies that all entry-level employees will need—regardless of the chosen business discipline. Also, most competency and skills surveys have been completed by technical area practitioners and not by human resource professionals. Actual research regarding employability skills and competencies from the perception of human resource professionals is extremely limited. Human resource professionals should be involved in research of this nature as they represent the group that applies the competencies and skills test to prospective employees during employment screening phases.

In order to be effective in their jobs as business educators, business administrators and faculty must be familiar with and dedicated to the needs of the 21st century workplace. The study's results should have a significant impact on 21st century business curricula.

STATEMENT OF THE PROBLEM

The problem investigated in this study is one of determining what competencies and skills will be deemed necessary for entry-level, four-year degreed business employees in the 21st century business workplace as perceived by human resource directors.

PURPOSE AND RESEARCH QUESTIONS

The purpose of this study was to investigate the specific competencies and skills that human resource directors in U.S. Fortune 500 companies perceived that entry-level business employees with a four-year business degree should possess in the 21st century. The findings of the study will benefit the business field in that up-to-date data about the emerging workplace can be disseminated. Business schools may employ the study's results to assist in updating their academic curricula.

The study answered the following questions:

1. What specific basic skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
2. What specific thinking skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
3. What specific personal quality skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
4. What specific resource competencies and skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century (year 2001 and beyond)?
5. What specific interpersonal skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
6. What specific information competencies and skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
7. What specific systems competencies and skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
8. What specific technology competencies and skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
9. What specific business etiquette skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
10. What specific corporate entrepreneurial or intrapreneurial competencies and skills do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?
11. What essential business attributes (professionalism, personal wellness, volunteerism) do human resource directors perceive that entry-level, four-year degreed business employees should possess in order to succeed in the business workplace in the 21st century?

METHODS AND MATERIALS

Research Design and Participants

This study utilized the descriptive research design in the form of survey research conducted through quantitative methods. Human resource directors from each of the U.S. Fortune 500 companies served as the participants for this research endeavor. Those U.S. Fortune 500 companies named in this study were selected from the listing of the *Fortune 500 Largest U.S. Corporations* as published in the April 27, 1998, issue of *Fortune* magazine. The human resource director's participation in the study was strictly voluntary, and they were assured complete confidentiality.

Instrumentation

Based on an extensive literature review, a questionnaire instrument was designed to address competencies and skills deemed necessary for the 21st century workplace. In part, the questionnaire was based on a prominent national skills report known as the SCANS Report (Secretary of Labor's Commission on Achieving Necessary Skills, U.S. Department of Labor, 1991). The questionnaire was entitled *Foundation Skills, Competencies, and Professional Development Skills Needed by Entry-Level, Four-Year Degreed Business Employees for the 21st Century (year 2001 and beyond) Business Workplace.*

Validity and Reliability

In order to establish an acceptable level of content validity, the instrument was submitted to a panel of experts who were recognized as prominent business professionals and educators. These individuals were asked to review the instrument and to note comments, suggestions, and recommendations concerning the development and the content of the instrument. Further, the experts were asked to identify any ambiguous or misleading statements and to make suggestions about the content, clarity, and format of the questionnaire. The suggestions of the panel of experts were incorporated into a revised instrument.

The researcher conducted a pilot study to aid in establishing validity and reliability. Human resource directors from 30 non-Fortune 500 companies served as the participants for the pilot study. Cronbach's coefficient alpha was used by the researcher to determine the reliability of the instrument. The reliability coefficient was .9372 which indicates that the instrument was reliable in its measurement of competencies and skills.

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Data Collection Procedures

A package was mailed to each participant; it included a cover letter, a survey questionnaire instrument, and a preaddressed, stamped envelope. The return date for the completed instrument was two weeks from the date that the instrument was mailed. The researcher sent a follow-up letter to all nonrespondents two days following the date of return for the initial instrument package. The follow-up mailing consisted of the entire survey package including letter and survey. The return date for the follow-up instrument was eight business days from the mailing date.

Data Analysis

Descriptive statistics were used to analyze all questions. The importance of these competencies and skills were analyzed on the following five-point scale:

Very Unimportant (VU) = 1
Unimportant (U) = 2
Neither Unimportant nor Important (N) = 3
Important (I) = 4
Very Important (VI) = 5

Frequency and percentage responses were computed for each research question. The number of responses from human resource directors in the western, central, southern, and northern regions of the U.S. as well as the responses from the same human resource directors for all regions combined, the major focus, for each competency or skill item, the importance of each competency or skill item, and the percentage of respondents indicating the importance of each competency or skill item was given.

Table 1. Importance of Basic Skills for Entry-Level, Four-Year Degreed Fortune 500 Employees

		Unimportant		Neither Unimportant nor Important		Important	
Research Question 1 Item	Competencies and/or Skills	n	%	n	%	n	%
1*	Reading	1	0.7	4	2.9	133	96.4
2*	Writing	1	0.7	2	1.4	136	97.8
3*	Mathematics and Computational	1	0.7	5	3.6	132	95.7
4*	Listening	1	0.7			138	99.3
5*	Speaking	1	0.7	4	2.9	134	96.4

*Number increased by two because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

Table 2. Importance of Thinking Skills for Entry-Level, Four-Year Degreed Fortune 500 Employees

		Unimportant		Neither Unimportant nor Important		Important	
Research Question 2 Item	Competencies and/or Skills	n	%	n	%	n	%
6*	Creative Thinking	1	0.7	9	6.5	129	92.8
7*	Decision Making	1	0.7	10	7.2	127	92.0
8*	Problem Solving	1	0.7	4	2.9	133	96.4
9*	Seeing Things in the Mind's Eye	1	0.7	16	11.6	121	87.7
10*	Reasoning	1	0.7	5	3.6	132	95.7

*Number increased by two because two respondents removed coding before returning instrument; could not be included in a regional count but could be included in combined count; number reflects skipped items.

RESULTS AND DISCUSSIONS

A total of 80 (16%) responses was received as a result of the initial mailing. A follow-up letter including a duplicate questionnaire was mailed to the remaining 420 human resource directors. Fifty-nine (11.8%) responses were received from the follow-up mailing. A total of 139 responses was received which represented a 27.8% return rate.

In the data analysis phase, the ratings of Very Unimportant and Unimportant were collapsed to determine if the skills and competencies were unimportant. The ratings of Important and Very Important were collapsed in efforts to determine if the skills and competencies were important. For the purpose of analysis, the researcher determined that competencies and skills were considered important if 50% or more human resource directors rated them as important.

Presentation of Research Findings

Research Question 1: Basic Skills. The information in Table 1 reports findings related to basic skills. The respondents felt that all of the basic skills were important. However, listening was considered the most important specific basic skill (99.3%) by an overwhelming number of respondents. Each of the remaining four specific basic skills were also rated extremely high by an overwhelming majority of respondents. Listening was followed by writing (97.8%), reading (96.4%), speaking (96.4%), and mathematics and computation skills (95.7%).

Research Question 2: Thinking Skills. The information in Table 2 reports findings related to thinking skills. In this category, problem solving (96.4%) was considered the most important specific thinking skill by the respondents. Each of the remaining four thinking skills were also rated as being important by the majority of respondents. Problem solving was followed by reasoning (95.7%), creative thinking (92.8%), decision making (92.0%), and seeing things in the mind's eye (87.7%).

Research Question 3: Personal Qualities. The information in Table 3 reports findings related to personal qualities. In this category, respondents rated integrity and honesty (98.6%) extremely high. Integrity and honesty were followed by individual responsibility (96.4%), self-management (95.0%), self-esteem (86.3%), and sociability (83.5%).

Research Question 4: Resource Competencies. The information in Table 4 reports findings related to resources. In this category, identifies, organizes, plans, and allocates time (97.1%) was considered the most important specific resource

Table 3. Importance of Personal Qualities for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 3 Item	Competencies and/or Skills	Unimportant n	Unimportant %	Neither Unimportant nor Important n	Neither Unimportant nor Important %	Important n	Important %
11*	Individual Responsibility	1	0.7	4	2.9	133	96.4
12*	Self-Esteem	1	0.7	18	12.9	120	86.3
13*	Sociability	3	2.2	20	14.4	116	83.5
14*	Self-Management	1	0.7	6	4.3	132	95.0
15*	Integrity and Honesty	1	0.7	1	0.7	137	98.6

*Number increased by two because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

Table 4. Importance of Resource Competencies and Skills for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 4 Item	Competencies and/or Skills	Unimportant n	Unimportant %	Neither Unimportant nor Important n	Neither Unimportant nor Important %	Important n	Important %
16**	Time*	1	0.7	3	2.2	134	97.1
17**	Money*	4	2.9	35	25.4	99	71.7
18**	Materials and Facilities*	7	5.1	45	32.6	86	62.3
19**	Human Resources*	4	2.9	25	18.1	109	79.0

*Identifies, organizes, plans, and allocates (phrase precedes each resource competency/skill).
**Number increased by two because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

Table 5. Importance of Interpersonal Skills for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 5 Item	Competencies and/or Skills	Unimportant n	Unimportant %	Neither Unimportant nor Important n	Neither Unimportant nor Important %	Important n	Important %
20*	Participates as a member of a team	2	1.4	3	2.2	134	96.4
21*	Teaches others	3	2.2	20	14.4	116	83.5
22*	Serves clients and customers	1	0.7	4	2.9	134	96.4
23*	Exercises leadership	3	2.2	8	5.8	128	92.1
24*	Negotiates	1	0.7	23	16.5	115	82.7
25*	Cultural diversity	1	0.7	8	5.8	130	93.5

*Number increased by two because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

skill by the respondents. Each of the remaining three skills were identifies, organizes, plans, and allocates human resources (79.%), identifies organizes, plans, and allocates money (71.7%), and identifies, organizes, plans, and allocates material and facility resources (62.3%).

Research Question 5: Interpersonal Skills. The information in Table 5 reports findings related to interpersonal skills. In this category, the respondents rated participates as a member of a team (96.4%) and serves clients and customers (96.4%) as the most important specific interpersonal skills. Each of the remaining four interpersonal skills were also rated as being important by the majority of respondents. Participates as a member of a team and serves clients and customers were followed by working with cultural diversity (93.5%), exercises leadership (92.1%), teaches others (83.5%), and negotiates (82.7%).

Research Question 6: Information. The information in Table 6 reports findings related to information. In this category, the respondents rated uses of computers (95.7%) as the most important specific information skill. Each of the remaining three information skills were also rated as being important by the majority of respondents. Use of computers were followed by interprets and communicates information (93.5%), acquires and evaluates information (89.2%), and organizes and maintains information (76.8%).

Research Question 7: Systems. The information in Table 7 reports findings related to systems. In this category, the respondents rated monitors and corrects performance (86.3%) as the most important specific systems competency. Monitors and corrects performance was followed by understands systems (84.2%), and improves and designs systems (69.8%).

Research Question 8: Technology. The information in Table 8 reports findings related to technology. In this category, the respondents rated applies technology (73.3%) as the most important technology skill. Applies technology to task was followed by selects technology (49.6%), and maintains and troubleshoots technology (29.6%).

Research Question 9: Business Etiquette. The information in Table 9 reports findings related to business etiquette. In this category, the respondents rated business protocol (82.5%) as the most important business etiquette skill. Business protocol was followed by telephone etiquette (79.6%), professional presence (76.6%), social etiquette (71.5%), meeting protocol (71.5%), career development skills (66.7%), office courtesies (66.4%), business travel (63.2%), international business etiquette (53.3%), and etiquette for business meals/other meal functions (49.3%).

Research Question 10: Corporate Entrepreneurial (Intrapreneurship). The information in Table 10 reports findings related to intrapreneurship. In this category, the respondents considered basic business skills (89.1%) to be the most important specific corporate entrepreneurial (intrapreneurship) skill. Basic

Table 6. Importance of Information Competencies for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 6 Item	Competencies and/or Skills	Unimportant		Neither Unimportant nor Important		Important	
		n	%	n	%	n	%
26*	Acquires and evaluates information	1	0.7	14	10.1	124	89.2
27*	Organizes and maintains information	2	1.4	30	21.7	106	76.8
28*	Interprets and communicates information	1	0.7	8	5.8	129	93.5
29*	Uses of computers	1	0.7	5	3.6	133	95.7

*Number increased by two because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

Table 7. Importance of Systems Competencies for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 7 Item	Competencies and/or Skills	Unimportant		Neither Unimportant nor Important		Important	
		n	%	n	%	n	%
30*	Understands systems	4	2.9	18	12.9	117	84.2
31*	Monitors and corrects performance	1	0.7	18	12.9	120	86.3
32*	Improves and designs systems	6	4.3	36	25.9	97	69.8

*Number increased by two because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

Table 8. Importance of Technology Competencies for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 8 Item	Competencies and/or Skills	Unimportant		Neither Unimportant nor Important		Important	
		n	%	n	%	n	%
33*	Selects technology	12	8.9	56	41.5	67	49.6
34*	Applies technology to task	6	4.4	30	22.2	99	73.3
35*	Maintains and troubleshoots technology	19	14.1	76	56.3	40	29.6

*Number increased by one because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

business skills were followed by personal creativity (84.7%) and management knowledge and skills (78.7%).

Research Question 11: Essential Business Attributes. The information in Table 11 reports findings related to essential business attributes. In this category, the respondents felt that professionalism (97.1%) was highly essential. Professionalism was followed by personal wellness plan (73.5%), and volunteerism (39.7%).

CONCLUSIONS

This study added to the existing body of knowledge on workplace competencies and skills. As such, it may contribute to the educational practices of business schools during the 21st century. The study enhanced and updated the literature on workplace competencies.

According to the study's findings, the need for a series of fundamental competencies and skills will be important for entry-level, four-year degreed Fortune 500 employees well into the 21st century (see Table 12).

RECOMMENDATIONS

The following recommendations are based on the study's findings:

1. As business school administrators and faculty evaluate programs and curricula, they will want to determine whether such programs and curricula are reflective of educational needs that will lead to success in the 21st century workplace.
2. Business school administrators and faculty can be open to the idea of teaching students workplace competencies and skills. When possible, the development of workplace skills should be integrated with the teaching of traditional business school courses.
3. Business schools will need to explore ways to provide students with opportunities to develop and practice workplace skills.
4. Business school faculty and staff need to review and experiment with implementing new ideas and methods of delivering education and training in the area of workplace competencies and skills as well as in traditional business courses. They will then want to focus on those teaching strategies that are conducive to the most positive development and preparation of students for the 21st century workplace.
5. Business school faculty need to dialogue and collaborate as well as develop long-term relationships with business and industry in efforts to stay current.

Changes such as those recommended will not ensure that business school graduates will be prepared in the competencies and skills necessary for the 21st century business workplace, but they certainly will provide them with a better opportunity for success.

Table 9. Importance of Business Etiquette Skills for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 9 Item	Competencies and/or Skills	Unimportant		Neither Unimportant nor Important		Important	
		n	%	n	%	n	%
36	Business protocol	3	2.2	21	15.3	113	82.5
37	Office courtesies	4	2.9	42	30.7	91	66.4
38	Etiquette for business meals/ other meal functions	5	3.7	64	47.1	67	49.3
39	Social etiquette	2	1.5	37	27.0	98	71.5
40	Telephone etiquette	3	2.2	25	18.2	109	79.6
41	Professional presence	5	3.6	27	19.7	105	76.6
42	Career development skills	10	7.4	35	25.9	90	66.7
43	International business etiquette	7	5.1	57	41.6	73	53.3
44	Meeting protocol	3	2.2	36	26.3	98	71.5
45	Business travel	8	5.9	42	30.9	86	63.2

Number increased by one because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped items.

Table 10. Importance of Corporate Entrepreneurial Skills for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 10 Item	Competencies and/or Skills	Unimportant		Neither Unimportant nor Important		Important	
		n	%	n	%	n	%
46	Basic business skills	2	1.5	13	9.5	122	89.1
47	Management knowledge and skills	7	5.1	22	16.2	107	78.7
48	Personal creativity	2	1.5	19	13.9	116	84.7

Number increased by one because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped item.

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Table 11. Importance of Other Essential Business Attributes for Entry-Level, Four-Year Degreed Fortune 500 Employees

Research Question 11 Region/Item	Competencies and/or Skills	Unimportant n	Unimportant %	Neither Unimportant nor Important n	Neither Unimportant nor Important %	Important n	Important %
49*	Professionalism	1	0.7	3	2.2	133	97.1
50*	Personal wellness plan	4	2.9	32	23.5	100	73.5
51*	Volunteerism	11	8.1	71	52.2	54	39.7

*Number increased by one because two respondents removed coding before returning instrument, consequently, they could not be included in a regional count but could be included in combined count; number reflects skipped item.

Table 12. Competencies Required in the 21st Century of Entry-Level Fortune 500 Employees With Four-year Business Degrees

Category	Competencies and/or Skills
Basic Skills	Reading; writing; mathematics/computation; listening; speaking
Thinking Skills	Problem-solving; reasoning; creative thinking; seeing things in the mind's eye
Personal Qualities	Integrity/honesty; individual responsibility; self-management; self-esteem; sociability
Resource Competencies	Identifies, organizes, plans, and allocates time; human resources; money and materials; facility resources
Interpersonal Skills	Member of a team; serves clients/customers; cultural diversity; exercises leadership; teaches others; negotiates
Information	Uses of computers; interprets/communicates information; acquires/evaluates information; organize/maintain information
Systems Competencies	Monitors/corrects performance; understands systems; improves/designs systems
Technology	Applies technology to tasks
Business Etiquette	Business protocol; telephone etiquette; social etiquette; meeting protocol; career development skills; office courtesies; business travel; international business etiquette
Corporate Entrepreneurial	Basic business skills; personal creativity; management knowledge and skills
Business Attributes	Professionalism; personal wellness

Curriculum Revision and Implementation: Implications for Business Teacher Education

Sandra R. Williams, The University of Montana, Missoula, Montana

ABSTRACT

New curriculum development for business teacher education programs was an immense step forward in meeting the needs of business education. Curriculum revision success, however, can only be realized when business teacher educators and administrators are willing and committed to assessing and adapting their business teacher education programs to model the standards (NABTE, 1997).

This study's primary purpose was to investigate and determine if curriculum changes had been made at National Association for Business Teacher Education (NABTE) institutions to reflect the 1995 National Business Education Association (NBEA) Standards and the 1997 NABTE Standards. Questionnaires sent to member representatives of all 139 NABTE institutions across the United States yielded a total response rate of 64%.

Findings were as follows: (a) 65% of respondents indicated that changes had been made in their business teacher education curriculum to meet the 1995/1997 Standards, (b) the net enrollment increase for business teacher education programs that had adopted the 1995/1997 Standards was 16.4%, (c) the top two reasons indicated for adopting the 1995/1997 Standards were to keep the curriculum current and to comply with accreditation and state standards, and (d) over 60% of business teacher education programs had business and information technology as their curriculum focus.

The need for business teacher education programs to implement the 1995/1997 Standards is clear. Other recommendations made include the need for NBEA and NABTE to continue to adapt the standards in order to keep pace with educational reforms, to be responsive to the needs of business and industry, and to meet the need for further research devoted to the changes occurring in business teacher education.

What is business education? Where has it been and where is it going? These questions have been asked throughout business education's long history. Commerce, the predecessor of the term "business," has been in use since before 1000 B.C., when traders kept track of ideas and transactions with the use of pictorial representations. Business education first appeared in the New World in 1635 when James Morton was hired as the schoolmaster in Plymouth Colony. Morton's duties included teaching the children how to read, write, and cast accounts. Casting accounts was a course in practical arithmetic that covered many of the subjects included in today's business education courses. The means of acquiring education in the practical methods of business, however, was primarily available through apprenticeships, which meant boys only (Schmidt & Jennings, 1990).

After the Industrial Revolution, business requirements changed. Inventions such as the telegraph, telephone, typewriter, phonograph, wireless telegraphy, the trans-Atlantic cable, shorthand systems, all-finger touch keyboarding, and a wide variety of business machines greatly impacted business and communications in the 19th century. These changes, as well as changes in the public educational systems that included the adoption of the 6–3–3 organizational model and legislation that moved vocational education from junior high school to high school age youth, all affected business education (Bartholome, 1997).

Business education and marketing education are now a part of National Business Education Association (NBEA) and are also associated with the Association of Career and Technical Educators (ACTE). ACTE had subgroups established especially for business educators (Bartholome, 1997), but NBEA had a much larger membership, compared to that of the business education division of ACTE.

Business education now includes programs to meet the needs of the global electronic age as well as other aspects of global education. Rethinking how to teach and learn in both public schools and colleges/universities has become a focus of teacher education programs and national associations. Information technology is another prominent content area in business teacher education programs.

NBEA published *The Standards for Business Education: What American Students Should Know and Be Able To Do in Business* in 1995 to provide up-to-date standards by which all business education programs could be measured. This publication explained the areas covered by business education and provided a K–14 curriculum for educators to use to help students become business literate (NBEA, 1995).

NBEA, which represents approximately 11,000 business educators in the United States, provides support and leadership

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for individuals and groups devoted to instruction for and about business. The development of the *National Standards for Business Education* furnished a framework that allows business education curriculum to parallel national and international business practices (NBEA, 1999).

The institutional division of NBEA, the National Association for Business Teacher Education (NABTE), followed NBEA's lead and published the *Business Teacher Education Curriculum Guide and Program Standards* in 1997. This publication was based on the *National Standards for Business Education* and developed with the belief that the only way to help students in kindergarten through grade fourteen become business literate is to provide relevant curriculum and professional development opportunities to current and future business teachers. The new guidelines and program standards were to be infused into business teacher education curriculum (NABTE, 1997).

Successful implementation of curriculum revisions can be a daunting task. Stark and Lattuca (1997) stated that shaping the college curriculum must be seen as an academic plan that includes both a macro and a micro approach to curriculum development and revision. They further agreed that this academic plan should include clear definitions and a sound pedagogical framework, in addition to strategies for successful implementation of the curriculum.

STATEMENT OF THE PROBLEM

The primary goal of secondary business education programs is to prepare students for careers in business. Whether students choose to study business in order to enter the workforce directly after high school, to continue on to a community college, or to pursue a degree in higher education, all need an awareness of the role business plays in the economic health of the United States and the global marketplace (NBEA, 1995).

The development of new curriculum for business teacher education programs was an immense step forward in meeting the dynamic needs of business education. The success of curriculum revision, however, can only be realized when business teacher educators and administrators are willing and committed to assessing and adapting their business teacher education programs to model the standards (NABTE, 1997).

A shortage of qualified business educators was an additional concern. A 1996 business education teacher supply survey conducted by the National Association of Supervisors of Business Education (NASBE) and the National Association for Teacher Educators for Business Education (NATEBE) indicated that 47% of business education professionals from 36 states believed there was a shortage of business education teachers in their states. The respondents also predicted an 81% shortage by 2001 (Okula, 1999). One way to combat this teacher shortage is to change the old "office education" focus to one that includes technology and other areas of the national curriculum. This study showed that business teacher education programs that had adopted the new curriculum standards experienced increased enrollment.

LaBonty's 1997–98 NABTE business education survey showed a continuing decrease in the number of college and university business teacher education programs. LaBonty (1999) stated that a decrease in the number of teacher preparation programs translates into a decline in the number of business teacher graduates. This decline will continue as more and more business educators near retirement age, a fact illustrated by the 40% of NBEA professional members (approximately 11,000 in number) who have 21 or more years in the classroom (Okula, 1999).

PURPOSE OF THE STUDY

The purpose of this study was to investigate and determine if curriculum changes had been made at NABTE institutions to reflect the 1995 NBEA *The Standards for Business Education: What American Students Should Know and Be Able To Do in Business* (1995) and 1997 NABTE *Business Teacher Education Curriculum Guide and Program Standards.* This research sought to determine whether it was possible to categorize or predict, based on selected variables, business teacher education programs that had adopted the 1995–1997 Standards. If this research found that 75% or more of the programs had not adopted the 1995–1997 Standards, this study sought to identify the principal reasons for the reluctance to change. Further, this research sought to identify early indicators of program improvement for those schools that had implemented the 1995–1997 Standards. For those schools lacking implementation, this study sought to ascertain such reasons and determine whether they were inherent in the Standards or existed within the structure of the program itself.

RESEARCH QUESTIONS

The following questions shaped this investigation:

1. Had changes in the business teacher education curriculum requirements been made to reflect the 1995 NBEA and 1997 NABTE curriculum guide and Standards?
2. Were trends in graduate and/or undergraduate enrollment associated with the school's decision to adopt or not adopt the 1995–1997 Standards?

3a. What major factors related to the adoption or non-adoption of the 1995–1997 Standards?

3b. In general, what was the curriculum focus (e.g. business and information technology, instructional technology, office skills, etc.) for business teacher education programs at NABTE institutions?

SIGNIFICANCE OF THE STUDY

The review of literature suggests that a dynamic curriculum needs to have a sound pedagogical framework and strategies for successful implementation. The National Business Education Association had developed dynamic curriculum standards for kindergarten through higher education. Implementation of these standards at all levels was paramount for business teacher education programs to remain viable. Those

responsible for business teacher education preparation through colleges and universities must have looked at options and alternative delivery systems as well as curriculum reform (Olson-Sutton, 1999).

Curriculum reform and the concomitant development of curriculum guides and standards involved a substantial commitment of time and resources. Unless the new curriculum was delivered to the students, however, it was all for naught. Schools frequently considered the curriculum effort complete once the new standards were developed without giving much thought to implementation. Implementation of the new standards was of critical importance (Ornstein & Hunkins, 1998).

RELATED LITERATURE

Vocational education reform and teaching certification standards have changed the educational requirements for vocational teachers. Secondary vocational teachers currently are required to have at least a baccalaureate degree in their teaching field, while most college professors in vocational teacher education programs have the required doctorate. These requirements were far removed from Prosser's ideals that masters of trade persons should be vocational teachers. The only institutions that had masters of trade persons teaching were specialized technical colleges and institutes.

EDUCATIONAL REFORM

Education had never suffered from a lack of suggestions for change. Reform movements had been recycled, renamed, and reapplied because of the outcry for massive change in education. History showed that educational reform was cyclical in nature. Educators had continually reviewed and adopted the latest curriculum theories only to find that a newly named model had been previously endorsed or rejected.

Baxter, et al. (1996) stated that the efforts for educational reform at higher education institutions are only as successful as improvements in the teaching process. With the support and active participation of administration and faculty, higher education can play the role of catalyst in making educational reform a success in the 21st century.

Teacher Education Reform. During the past 12 years, teacher education reform had been suggested and implemented in a wide variety of formats. Lynch (1997) stated that educational researchers, teachers' associations, college faculty, state education governing boards, legislators, and the general public had had much to say about their expectations for teachers and teacher education. One group suggested that teacher education be offered only at the graduate level after receiving a liberal arts bachelor degree. Another group wanted teacher education delivered through professional development and laboratory schools. A third group wanted teachers to demonstrate mastery on a common core of professional knowledge and pedagogical skills prior to licensure. Most of these reform statements focused primarily on the traditional high school subjects (Lynch, 1997).

Vocational Teacher Education Reform. It was not until 1993 that vocational educators appeared to take a serious look at educational reform. Before that time, few institutions with vocational teacher education showed much interest about reform or concern that graduates of their programs failed to meet the general public's expectation for teacher preparation (Lynch, 1997).

As the borders of the United States economy expanded, international work opportunities increased. Global awareness is a necessity for future workers to have an understanding of competitive, cultural, and economic factors that influence ways of doing business and working in the international arena. Preparing individuals for the global economy was a challenge to all educational institutions. Vocational education, the educational program area specifically designed to prepare students for the world of work, could infuse international concepts into their programs to make today's youth ready for the global workplace. This was another reason for emphasizing work-force experiences for all students (Brown, 1997).

Support from collaborative communities was one of the major tenets needed for successful reform. University faculty, researchers, teams of teachers, businesspersons, parents, social service personnel, and others committed to youth are all indispensable participants in the effort to improve education. Transformational changes congruent with the method of delivery for teaching and schooling must meet the challenges of the 21st century (Lynch, 1997).

Business Teacher Education Reform. New and emerging technologies, the global economy, and the dynamic nature of the world of business had led to the review and update of business teacher education. Continuous improvement in the initial and advanced preparation of business teachers is the essential mission of NABTE. The development of business teacher education curriculum and program standards in 1997 reflected the competencies needed in the 1990s and beyond. Business teacher education programs should be redesigning curriculum to include not only the NABTE Standards, but also the *National Standards for Business Education* grades K - 14. Of major importance to the redesign of the business teacher education programs in universities and colleges across the nation was to build on a strong business core foundation. Additionally, teacher candidates needed to be of top caliber and proficient in the knowledge of their discipline (NABTE, 1997).

Because change continues to be an ongoing factor for curriculum revision, most business educators had repeatedly altered their curriculum to reflect the dynamic nature of business. Since decades ago, when clerical skills were the most important function of business support personnel, to present-day global awareness and the barrage of technological functions, most business educators have been agents of change. Some secondary and higher education institutions, however, had not been receptive to change and had failed in their support of students preparing for careers in the 21st century Information Age (NBEA, 1995).

Business teacher education has a unique opportunity to revitalize programs and curriculum while recruiting highly

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motivated individuals to lead business teacher education into the future. Contrary to some researchers' beliefs that vocational education should no longer be divided into specific areas, business teacher education is moving forward to attain new heights in the next millennium.

How business educators address and act on educational practices, delivery systems, teaching tools, and curriculum contents will determine the impact on tomorrow's students. Today the Internet, interactive audio, and video allow teachers and students to be located in different parts of the country, maybe even the world, yet receive information from a global classroom. Advances in technology, reorganization in the global business world, and changes in demographics of our classrooms require that modifications in the learning environment will need to be increasingly customized to fit the diverse needs and learning styles of our students. Business teacher educators must accept the challenges before them and ensure that their students are prepared for the 21st century (Gallo Villee & Curran, 1999). Gallo Villee & Curran (1999) stated:

> the one constant amid all this change . . . is the importance of teachers to the learning process. As our role shifts from providers of information to facilitators of learning, we [teachers] remain crucial in motivating and enabling our students to succeed (p. iii).

The future of business teacher education will be shaped by what educators do today. No one really knows what tomorrow will bring; however, it is necessary for business educators to keep adding new ideas to their body of knowledge. There is much to learn and each day is a new opportunity to help mold students' futures. With positive attitudes and a drive for success, business education will move to secure a vital role in the 21st century (Gallo Villee & Curran, 1999).

If business education programs and teacher education programs are to address the challenges of preparing well-qualified individuals for the nation's workforce, comprehensive and systematic transformation is imperative. High performance workplaces of American business and industry will require workers who possess the skills, knowledge, and values necessary for success in an ever-changing, diverse, technological, and competitive global market (Frantz, 1997).

In order to restructure and revitalize curricula, teacher preparation programs should focus on developing teachers for new roles as leaders working within schools and communities. These new roles will require a broad-based understanding of the purpose of career preparation as an integral component of preparing youth for productive contributions to society. As a major outcome of schooling, the importance of career preparation should be a common element in teacher preparation. Teacher education programs should be structured and conducted to optimize relationships between subjects and their applications in workplaces and family life. Teachers should be prepared to focus on contextual relationships between subject matter and integrated work-based concepts that are meaningful to students at the time of learning (Frantz, 1997).

METHODOLOGY

Research Design

This study used a descriptive design that took advantage of the power of quantitative analysis to determine and report the findings as they relate to the research questions. This self-report study solicited information from all NABTE-member individuals using a questionnaire.

Population

The population for this study included all 139 NABTE members. A list of member schools and the institutional representative were obtained from a 1998 membership list provided by NBEA. For follow-up purposes, the representatives e-mail addresses were obtained from the NBEA Web site, http://www.nbea.org.

Instrumentation

The self-designed questionnaire for this study contained six sections consisting of a total of 24 questions. The first four sections requested standard information regarding (a) institution demographics, (b) program demographics, (c) faculty demographics, and (d) student demographics. The fifth section of the questionnaire requested information regarding changes to the curriculum and the current curriculum content. The sixth and last section requested member representatives to rate the attitudes and perceptions toward the business teacher education program on a five-point Likert rating scale.

The instrument was initially tested for face validity and later a pilot test was conducted for face and content validity. Five people with scholarly credentials in the field of business teacher education recommended minor changes which were incorporated into the final instrument.

The first mailing included a questionnaire, a cover letter describing the nature of the study, and a postage-paid envelope that was mailed to NABTE member representatives in the latter half of September 1999. Respondents were assured of strict confidentiality; however, each questionnaire was marked with a number for follow-up purposes only. If a response rate of less than 60% was obtained after the first mailing, a second mailing of the complete instrument took place two weeks after the initial mailing. Two weeks after the second mailing, additional non-respondents were contacted by e-mail or telephone to encourage subsequent replies.

Data Analysis

A descriptive analysis of appropriate variables was tabulated and reported. This included the number of schools that had and had not changed their curriculum to reflect the 1995–1997 Standards. Descriptive statistics identified by frequency the principal reasons for the curriculum change or lack of change.

The predictability of whether schools chose to implement or not implement the 1995–1997 Standards was analyzed using Discriminant Function Analysis. This test is used when trying to predict dichotomous nominal variables from

interval ratio level predictor variables. The predictor variables included the percentage of change in the graduate enrollment and/or the percentage of change in the undergraduate enrollment. The null hypothesis stated that there was no significant statistical predictability regarding the adoption to the 1995–1997 Standards. Statistical significance was defined as alpha $\leq$ or .05. A practical level of significance was defined as 75% or greater predictability.

Question Number 24 was analyzed by listing the frequency of responses and reported for each category. A Chi Square Goodness-of-Fit Test was conducted to determine if responses differed from what would have been expected by chance. Data analysis also included comparisons found to be appropriate to this study.

FINDINGS

The findings show the actual number of respondents answering each question. Not all respondents answered all survey questions. Therefore, *n* will vary from question to question.

Demographic Characteristics

In response to the survey question regarding location of the business teacher education program, 41 respondents (50%, $\underline{n} = 81$) indicated that their business teacher education programs were located in Schools/Colleges of Business, 28 (34%) were located in Schools/Colleges of Education, and 12 (14%) were located in other schools.

Fifty-five respondents (67%, $\underline{n} = 81$) indicated that the business teacher education program had always been housed in the current school/college. Of the 26 programs that had changed locations, 77% moved to Schools/Colleges of Business. The information shown in Table 1 highlights the other schools/colleges where business teacher education programs are housed.

Table 1. School/College Housing Business Teacher Education Programs

	Number	Percentage of Total $\underline{n} = 26$
Business	20	77%
Education	3	11%
School of Applied Sciences	2	7%
Office Administration	1	3%

Table 2. Name of Department Where Business Teacher Education Program Housed

	Number	Percentage of Total $\underline{n} = 78$
Business education	19	24%
Business information systems	16	21%
Education	13	17%
Business	11	14%
Adult, counselor, and technology education	4	5%
Curriculum and instruction	4	5%
Academic technologies and educational leadership	2	3%
Business and economics	2	3%
Management/marketing	2	3%
Occupational studies	2	3%
Human resource training and development	1	1%
Management information systems	1	1%
Professional studies division	1	1%

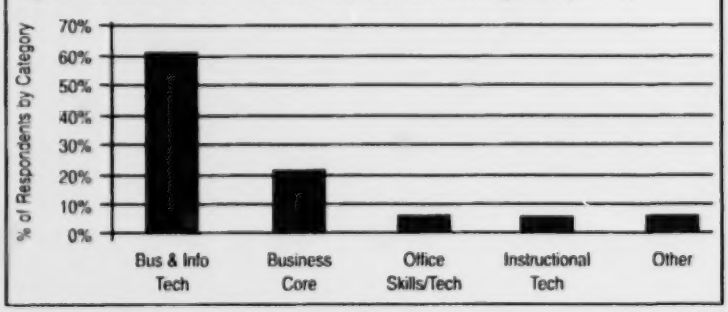
Table 3. Rank and Number of Faculty

Rank	Professor		Assoc. Professor		Assist. Professor		Other	
Employee Status	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Number	92	9	70	10	61	4	28	72

The top four department names in which Business Teacher Education programs were housed are Business Education, Business Information Systems, Education, and Business as shown in Table 2. Of the 78 respondents, 19 indicated that Business Education was the name of their program's department.

Full-time professors occupy the majority of business teacher education positions. As shown in Table 3, full-time associate professors and part-time faculty follow as highest reported categories.

Figure 1. Focus of Business Teacher Education Programs (n = 76)



Focus of Business Teacher Education Programs

Business and information technology is the primary focus of business teacher education programs by more than two to one, as the information in Figure 1 shows. Forty-six of the 76 respondents indicated that business and information technology was their program's major concentration area.

In business teacher education programs located in Schools or Colleges of Education, over 50% required business and information technology as their major focus. Thirty percent of these business teacher education programs required the business core.

More than 70% of business teacher education programs located in Schools or Colleges of Business had business and information technology as their major focus. Over 20% of

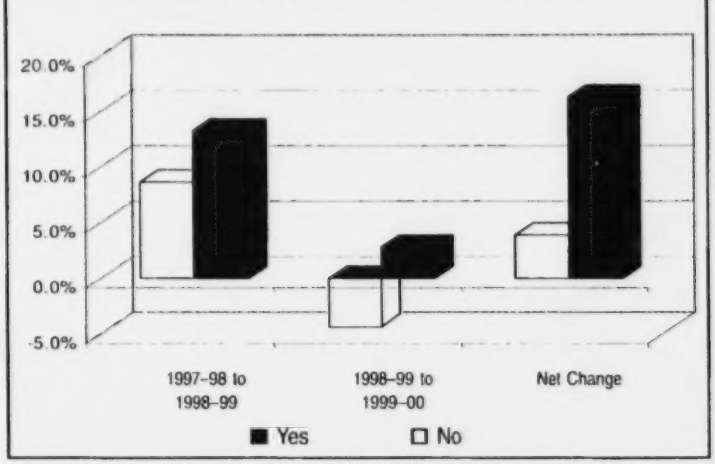
these business teacher education programs required the business core.

The office skills/technology option does not appear to be a major focus in departments located in either the Schools or Colleges of Business or Schools or Colleges of Education. Only three respondents indicated that the office skills/technology option was the major focus. These three programs were housed in Schools or Colleges of Business.

Program Elimination

A question about program elimination indicated that 61% (n=79) of respondents had not discussed the possibility of program elimination. Thirty-nine percent, however, had discussions regarding the elimination of the business teacher education program from their school/college.

Figure 2. Enrollment Changes Based on Standards Adoption



Enrollment Changes

Institutional representatives reported the number of students enrolled in the categories of associate, baccalaureate, masters, and doctoral degree programs, as well as certification/licensure and post-baccalaureate categories. There was clear indication that the number of students enrolled in business teacher education programs between 1997 and 1999 in all categories had increased. The number of students enrolled in doctoral programs had more than doubled in the same two-year span. The baccalaureate program enrollment grew by 8%, the master's program enrollment grew by 75%, and the doctoral program enrollment grew by over 100% between 1997 and 1999. The results shown in Table 4 (n = 79) clearly indicate that enrollment in graduate degree programs had grown more rapidly than the enrollment in baccalaureate degree programs.

The trends in graduate and/or undergraduate enrollment associated with the school's decision to adopt or not adopt the 1995–1997 Standards are highlighted in Figure 2. The business teacher education programs that did adopt the 1995–1997 Standards experienced a 13.3% enrollment increase from the 1997–1998 to 1998–1999 school years and a 2.7% enrollment increase from 1998–1999 to 1999–2000 school years. Business teacher education programs that did not adopt the 1995–1997 Standards experienced a 8.6% enrollment increase from the 1997–1998 to 1998–1999 school years and a 4.5% enrollment decrease from the 1998–1999 to 1999–2000 school years. The net enrollment increase for business teacher education programs that had adopted the 1995–1997 Standards was 16.4%, while the net enrollment increase for programs that had not adopted the 1995–1997 Standards was 3.9%.

Of particular interest here is the increase in students enrolled in graduate programs from 1997 to 2000. Doctoral enrollment had increased by 110% and master's enrollment had increased 75%. In addition, the enrollment in certification/licensure programs had increased by 70%.

Table 4. Program Enrollment by Category

	Enrollment Increase	Enrollment 1997–98	Enrollment 1999–00
Baccalaureate	161	1867	2028
Masters	385	513	898
Doctoral	22	20	42
Other: certification/licensure	38	54	92
Other: postbaccalaureate	1	15	16
Other: associate of arts	2	3	5

Table 5. Degrees Awarded by Category

	Change in the Number of Degrees Awarded	Degrees Awarded 1997–98	Degrees Awarded 1999–00
Baccalaureate	(170)	604	434
Masters	(2)	193	191
Doctoral	8	5	13
Other: certification/licensure	11	27	38
Other: postbaccalaureate	(2)	10	9
Other: associate of arts	(3)	8	5

Degrees Awarded

Institutional representatives reported the number of degrees awarded in the categories of associate, baccalaureate, masters, and doctoral degree programs, as well as certification/licensure and post baccalaureate categories. Even though the number of students enrolled in all categories increased, the number of baccalaureate and masters degrees awarded decreased. The number of doctoral degrees awarded, however, increased by over 100% from 1997 to 1999. Although LaBonty's 1999 study indicated a decline in NABTE business teacher education programs, the number of doctoral degrees awarded had increased as shown in Table 5 (n = 79).

Curriculum Changes

Forty-six (65%, n=46) of the 71 respondents indicated that changes were made in their curriculum to reflect the 1995 NBEA and 1997 NABTE guides and standards. The top two reasons given for implementing these curriculum changes were to keep the curriculum current and to comply with accreditation and state standards. Another reason given by several respondents was to meet technology mandates. Of the 25 (35%, n=25) institutions

that had not yet adopted the 1995–1997 Standards, 48% were anticipating adoption within 1.5 semesters.

Required Course Work

The information shown in Figure 3 illustrates the course work most often required in business teacher education programs. Of the numbers receiving the most responses (60% or more) were management, marketing, economics, business law, information systems, communications, accounting, math, integrated software applications, and methods of teaching business courses.

The 12 content areas of the 1995–1997 Standards are accounting, business law, career development, communications, computation, economics and personal finance, entrepreneurship, information systems, international business, inter-relationships of business functions, marketing, and management. The only 1995–1997 Standard content areas that did not receive a response rate of over 50% were entrepreneurship (20%, n=16), career development (8%, n=8), and international business (12%, n=10). Although 50% or more of the respondents did not require these three content areas, some college and university business teacher education programs still recognize and require them. The findings also show that business teacher education programs were incorporating the 1995–1997 Standards into their curriculum requirements.

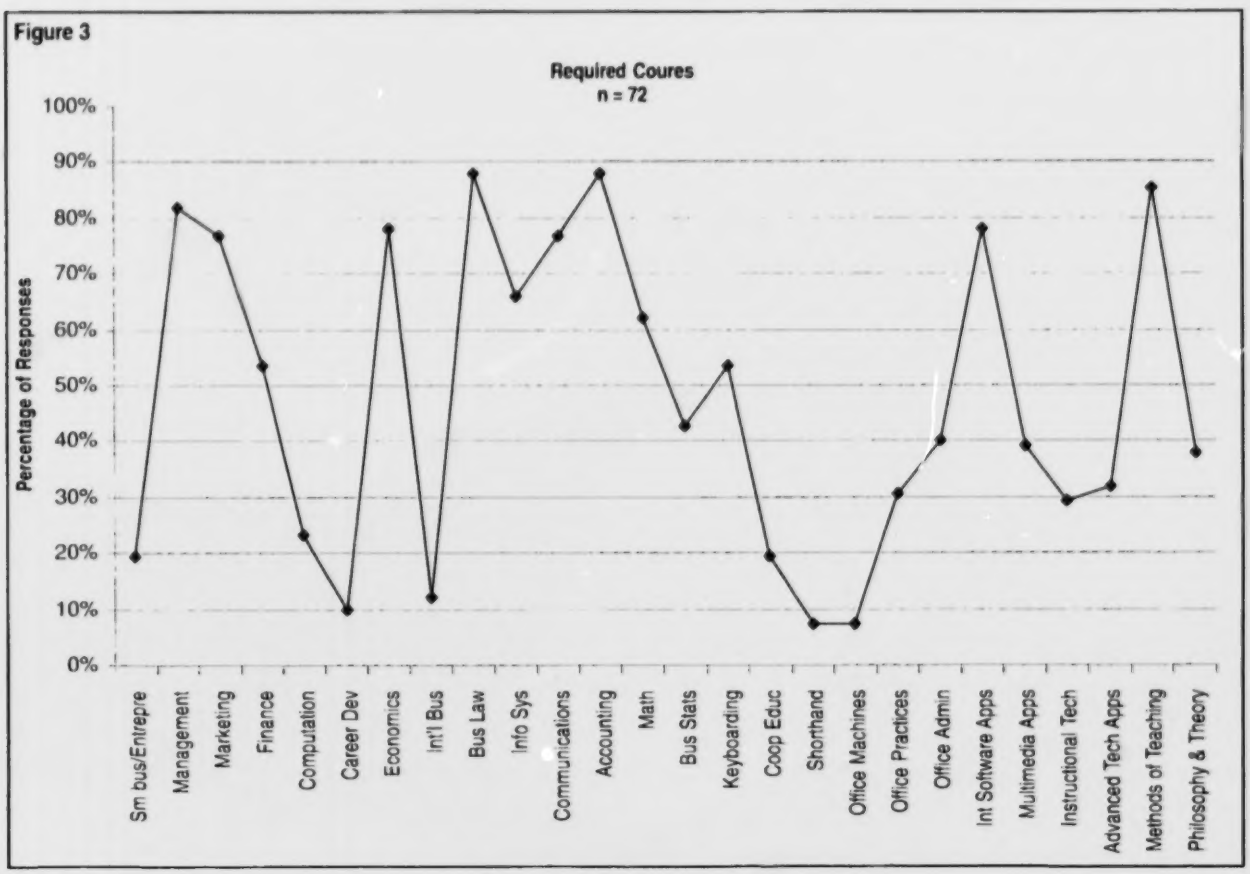
Of business teacher education programs that did not require students to take courses in the 12 content areas of the 1995–1997 Standards, 35% of the17 responses utilized continuing education and 29% received no other recommended opportunities to take courses. The option to complete a master's in education with a business cognate made up 18% of the remaining responses. Students who had found secondary business education teaching positions after graduation had a variety of options in which to receive education in all 12 of the 1995–1997 Standard content areas.

Vocational Certification

Sixty-seven percent ($\underline{n}$ = 76) of NABTE institution business teacher education programs reside in states which require vocational certification. States not requiring vocational certification made up 21% of the responses, and the other category received 12% of the responses.

Attitudes and Perceptions Toward Business Teacher Education Programs

A Likert scale of one to five was used to measure the attitude/perception held by colleagues in the school in which the business program resides. A Chi-Square Goodness-of-Fit test was utilized to test the frequency distribution that resulted in a Chi-Square value of 27.8 and a p value of less than .05. This frequency distribution was not what would have been



expected by chance. Sixty-two percent (n = 76) of respondents believed that the majority of their school colleagues held a favorable opinion of the business teacher education program.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, the following conclusions and recommendations can be made.

Conclusions

The adoption of the 1995–1997 Standards by 65% of the institutions surveyed indicates that the 1995–1997 Standards have been incorporated into a majority of business teacher education programs. A 65% adoption rate in four years also indicates that business teacher educators are responsive to national curriculum reform.

The majority of business teacher education programs had as their focus business and information technology (61%). The second major focus in programs was the business core (20%). The major focus of business teacher education programs located in Schools or Colleges of Business was business and information technology instead of the business core. The major focus in Schools or Colleges of Education is also business and information technology followed by the business core. Several of the respondents indicated that business and information technology and the business core were required in their programs. This indicates that technology has been integrated into and is a major focus of business teacher education programs.

This study found that the majority of business teacher education departments were titled Business Education, followed closely by Business Information Systems. None of the respondents indicated that their program title included the term Office Administration or Office Education. Ten years ago, the word office appeared in many business teacher education program titles. Office administration and office education courses did not appear to be major foci in the programs surveyed. This indicates that there was a move from the old "office skills" focus and the stigma attached to "office skills" in business teacher education programs. This was also another reason why the Western region changed its name and focus to business and information technology education. The respondents to this study indicated that office skills courses no longer dominate the required course work.

Another change apparent in this study was the fact that the majority of faculty members in business teacher education programs were full-time professors. As these full-time professors retire, the number of business teacher education faculty members may decrease unless tenure-track faculty again fill the positions. According to Okula (1999), adjunct professors instead of tenure-track faculty were currently filling the positions left open by retiring faculty. The shortage of college/university business teacher educators will continue unless business teacher educators address the problem. Patricia Moody, Dean of Applied Professions at the University of South Carolina in Columbia, stated that the most serious problem in business education today is the teacher shortage at every level (Okula, 1999).

To this point, the study has provided indications that change has taken place in business teacher education curriculum. Variability of the enrollment data did not allow for prediction, but overall numbers indicate a 325% net enrollment difference between business teacher education programs that have adopted the 1995–1997 Standards and programs that have not adopted the 1995–1997 Standards, as shown in Figure 2. The positive relationship between the 1995–1997 Standards adoption and the overall change in enrollment is the most impressive finding of this study.

Recommendations

Recommendations that emerged from this study are as follows:

- All business teacher education programs should adopt the 1995–1997 Standards.
- All business teacher education programs should continue to change curricula to meet the proposed NBEA and NABTE standards updates.
- Business teacher education programs and national associations should continue to pursue ways in which to remedy the business teacher shortage at all levels.
- NBEA and NABTE should continue to adapt their standards to the ongoing changes taking place because of educational reform and be responsive to the needs of business and industry.
- Business teacher education should continue incorporating emerging and relevant technology into their programs.
- This study should be conducted again later to determine longitudinal changes in the course work added or dropped from the curriculum. After new curriculum has been in place for more time, one might expect predictability to occur.
- Further research should be conducted to study the changes occurring in business teacher education curricula. The findings of this future research should be submitted to national organizations and NABTE institutions.

Business teacher educators as well as educators in a variety of other fields have been or are in the throes of standards development and implementation. This nationwide movement is a major part of educational reform in the United States today. Dugger (1999) may best express the belief held by many people involved with the creation and implementation of standards:

> Content standards represent not an end, but a beginning. Looking back, developing standards may be the easiest part . . . The difficulty lies ahead in the acceptance and implementation of the standards . . . The common sense of educational reform and the improvement of technological literacy begins with the implementation of these standards–now, at the beginning of the 21st century (p. 62).

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The Demand for Business Education Teachers in California As Perceived by Middle School and High School Principals

Barbara A. Wilson and Susan Plutsky, California State University, Northridge, Northridge, California

ABSTRACT

Overall, teachers are in demand in California, but are business education teachers included in that demand? A study was undertaken to determine the status of business teachers, the perceptions of middle and high school principals about the demand for business teachers over the next five years, and the status of business education programs. The study concluded that throughout the 1990s, full-time business education teachers have been in demand in California. Moreover, this demand is expected to continue for at least the next five years. Recommendations were made about continuing the B.S. degree and the waiver program in Business Education at California State University, Northridge and developing and implementing a recruitment plan.

Increases in student population, teacher retirements, and teacher turnover have contributed to the demand for teachers overall. But does that demand include business education teachers?

Earlier articles based on findings from National Association for Business Education (NABTE) surveys of business teacher education institutions projected a grim future for business education. Bronner's 1989–1990 survey revealed that the number of business education teachers and teacher education programs was declining (1991). Even though the number of teachers and programs was declining, he reported, "The supply of business teachers still exceeds the demand. . ." (1991, p. 13). O'Neil's 1991–1992 survey also showed that the supply of business teachers exceeded the demand (1993), and subsequent NABTE research studies show that a demand exists. Based on the 1995–1996 NABTE survey results, McEntee (1997) reported that "demand significantly exceeds supply at the secondary level" (p. 7). Similarly, based on the 1997–1998 NABTE survey results, LaBonty (1999) claimed, "The demand for secondary business educators is perceived by institutional representatives to be higher than any point over the past seven years" (p. 17).

State studies also show that a demand exists. In the state of Washington, Bertelson and Byrd (1992) found that high school principals perceived an increasing need for business education teachers to meet program demands including academic integration, increased student population, increased computer use, and workplace needs. Similarly, the Illinois Business Teacher Educators Council under the direction of Marcia Anderson-Yates (1994) revealed that the current and projected demand for business education teachers will be more than the supply of newly certified teachers graduated by the state's institutions of higher education. Likewise, Wilkins and Graves (1997) concluded that "there will continue to be a strong need for business teachers in Illinois if secondary programs are not eliminated or reduced" (p. 23). Ackley and White (1996) reported that business teacher preparation programs will not produce a sufficient number of business education teachers to replace the vacancies in Virginia.

This demand may be attributed to the following factors. In the United States, 27% of the business education teachers are near retirement (Lynch, Hartley, Mantle-Bromley, & Cobb, 1996). Additionally, Luft and Noll (1993) reported that 34% of the 235 business teacher programs nationwide expect their programs either to be integrated with other programs or eliminated.

In support of these factors, Anderson-Yates (1994) contends that the demand for business education teachers is strong in Illinois because of an aging faculty, an increasing student population, and the closing of two business education preparation programs at Western Illinois and Northern Illinois Universities. Similarly, Ackley and White (1996) revealed that during the next seven years, over one-third of the middle and secondary business education teachers will leave or retire, while the student population is expected to remain stable or increase moderately. Finally, Bertelson and Byrd (1992) reported program closings that leave both Washington State and Oregon with only two business teacher education programs.

Like other universities in states across the country, California's universities have also eliminated business teacher education programs. In fact, only one university now offers a complete business teacher education program, and the number of students enrolled is low.

PURPOSE

This study was undertaken to determine the status of business education programs in California middle and high schools. Specifically, three questions were addressed:

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1. What is the status of business education teachers in California?
2. What are California middle and high school principals' perceptions about the demand for business education teachers over the next five years?
3. What is the status of business education programs in California?

The findings of this study can help faculty and administrators in the College of Business Administration and Economics at California State University, Northridge, determine the future of the business education program. Issues concerning the program's future include continuing to offer the Bachelor of Science degree in Business Education and the single-subject clearance (an individualized program designed by a business education faculty advisor for students who wish to teach business courses at the secondary level but possess a four-year degree in a major other than business education) and, if so, making the program accessible to potential students throughout the state.

METHOD

A descriptive study was used to investigate the status of business education in California. The population comprises 898 middle school and high school principals employed by school districts representing seven zip codes throughout California.

A revised version of the questionnaire from the Bertelson and Byrd (1992) study was used to collect data from the population. Their questionnaire determined the status of business education teachers, projections, and demographics. The revised version was reviewed by a panel of business education professors; it comprises 12 questions designed to elicit information about the following three categories.

1. Status of Business Education Teachers investigated the number of business education teachers, whether teachers of other disciplines teach business courses, whether a pool of substitute teachers with a background in business subjects exists, the last year business education teachers were hired, and the number of qualified applicants.
2. Projections, which are limited to the next five years, determined the number of business education teachers needed, the number of business education teachers who will retire or leave, and the principals' perceptions of the demand for business education teachers.
3. Status of Business Education Programs addressed the principals' perceptions about the quality of their business education program, whether keyboarding or computer literacy is required for graduation, course offerings, and whether a budget or a replacement plan exists for updating computer hardware and software.

Data were collected according to Dillman's (1978) Total Design Method, which is based "on both a theory of response behavior and an administrative plan to direct its implementation" (p. 2). On October 2, 1998, an envelope comprising a cover letter, a copy of the questionnaire, and a stamped, preaddressed envelope was sent to the principals. One week later, a reminder postcard was sent; two weeks later, another envelope comprising the cover letter, a copy of the questionnaire, and a stamped, preaddressed envelope was sent to those who had not yet responded.

Of the 898 principals, 662 responded, which is a 74% response rate. Even though the response rate was acceptable, the possibility of nonresponse bias was investigated. The questionnaires were received in three waves, and chi-square analysis (.05 level of observed significance) was performed on each of the questions in the waves to determine any differences or trends. Because the computed chi-square values were not significant, the assumption can be made that little or no non-response bias exists.

Descriptive statistics (frequencies and percentages) were used to summarize the findings.

FINDINGS

The respondents provided information about the status of California middle and high school business education teachers, projections for new hires and for those who will leave or retire, and the status of business education programs. They represent schools in three regions that are identified by seven zip codes. Specifically, the 90000, 91000, and 92000 zip codes include the southern California counties, such as San Diego, Orange, Los Angeles, Riverside, and San Bernadino. The 93000 zip code includes central California counties such as Fresno, Kern, Mariposa, Monterey, and San Luis Obispo; the 94000, 95000, and 96000 zip codes include northern California counties such as San Francisco, Humbolt, Sacramento, Lassen, and Tehama.

Status of Business Education Teachers

The principals reported that their schools employ 1,762 teachers in their business education programs. Of these, 1,392 (79%) are employed full time, and 370 (21%) are employed part time.

The majority of the respondents (76%, n=503) indicated that only business education teachers teach courses in their programs. The remaining principals (24%, n=159) reported having teachers from other disciplines teach the courses in their business programs. Of these principals, 40% (n=64) reported that they often assign math teachers; 23% (n=37), English teachers; 17% (n=27), social studies teachers; 10% (n=16), physical education teachers; 4% (n=6), science teachers; 4% (n=6), foreign language teachers; and 2% (n=3), music teachers.

When recruiting business teachers, the principals reported that only a small number of qualified teachers apply for substitute and full-time positions. For instance, 80% (n=530) of the respondents reported that an inadequate pool of substitute teachers with a background in business education exists, whereas only 20% (n=132) reported that an adequate pool exists. Moreover, the principals reported having from no qualified teachers to only 4 qualified teachers apply for the last full-time business education position, as shown in Table 1.

Table 1. Number of Qualified Teachers Who Applied for the Last Full-Time Business Education Position

Qualified Applicants	Schools (n)	Schools (%)
0	98	15
1	81	12
2	123	18
3	93	14
4	91	14
Unknown	176	27
Total	662	100%

Despite the small number of qualified applicants, business education teachers have been hired consistently throughout the 1990s. Since 1993, the number of business education teachers hired has increased more than 10 times, as shown in Table 2.

Table 2. Business Education Teachers Hired in the Last Nine Years

Year	New Hires (n)	New Hires (%)
1990	39	8
1991	18	4
1992	15	3
1993	15	3
1994	39	8
1995	43	9
1996	58	12
1997	102	20
1998	163	33
Total	492	100%

Projections

When asked about the demand for business education teachers during the next five years, 39% (n=258) of the respondents believe the demand will increase while 42% believe the demand will remain the same (n=278). Only 14% (n=93) of the principals believe the demand will decrease; 5% (n=33) did not respond.

Specifically, the respondents project they will hire business education teachers during the next five academic years, as shown in Table 3. The greatest demand for teachers existed during the last two academic years.

Table 3. Five-year Demand for Business Education Teachers by Zip Code

Zip Code	n	1999–2000	2000–2001	2001–2002	2002–2003	2003–2004
90000	65	26	22	26	12	15
91000	94	39	32	20	18	26
92000	129	39	51	37	21	26
93000	102	32	34	24	20	24
94000	86	34	25	20	13	14
95000	156	51	49	35	25	37
96000	30	5	7	3	1	2
Total	662	226	220	165	110	144

Of the 1,392 full-time business education teachers, approximately 37% (n=515) will retire or leave the profession during the next 5 years. Specifically, by 2001, the respondents anticipate that 195 teachers (14%) will retire or leave the profession; by 2004, 320 teachers (23%).

Status of Business Education Programs

The majority of the principals have a positive perception of their business education program. Specifically, 23% (n=152) of the respondents perceive the quality of their business education program to be outstanding; 44% (n=292), good; and 20% (n=132), fair. Only 6% (n=40) perceive the quality of their business education program to be poor, and 7% (n=46) did not respond.

The respondents revealed that their business education programs offer a variety of business courses. Of the 33 courses, 19 of them (58%) pertain to technology, 4 of them (12%) pertain to the functional areas, and 10 of them (30%) are service, as shown in Table 4. Keyboarding, computer applications, word processing, introduction to computers, accounting, introductory business, and business math are the most popular courses offered in their middle and high schools.

Table 4. Courses Offered in the High Schools and Middle Schools

Courses	Schools (n)	Schools (%)
Technology		
Keyboarding	440	66.46%
Computer applications	333	50.30%
Word processing	178	26.89%
Introduction to computers	161	24.32%
Desktop publishing	68	10.27%
Business technology	51	7.70%
Computer programming	41	6.19%
Information processing	34	5.14%
Computer science	28	4.23%
Web page design and management	23	3.47%
Graphics	21	3.17%
Internet	20	3.02%
Computer operations	19	2.87%
Multimedia	18	2.72%
Computer networking	16	2.42%
Computer information systems	14	2.11%
Computer repair	13	1.96%
Data processing	13	1.96%
Virtual business	2	0.30%
Functional Areas		
Accounting	382	57.70%
Marketing	91	13.75%
Management	81	12.24%
Finance	30	4.53%
Service		
Introduction to business	163	24.62%
Business math	160	24.17%
Office administration	98	14.80%
Business law	59	8.91%
Entrepreneurship	32	4.83%
Internship/academy/work experience	31	4.68%
Business communication	25	3.78%
Economics	19	2.87%
Business English	15	2.27%
International business	14	2.11%

Keyboarding or computer literacy is not a requirement for graduation in 54% (n=357) of the schools. The remaining 46% (n=305) of the schools, however, have a keyboarding or computer literacy requirement for graduation.

The majority of the principals (60%, n=397) reported having a budget and a replacement plan for updating computer

hardware and software in the labs; whereas, 40% (n=265) do not.

CONCLUSIONS AND RECOMMENDATIONS

Throughout the 1990s, full-time business education teachers in California have been in demand. This trend is expected to continue for at least the next five years; it may be attributed to the number of teachers retiring or leaving the profession and the number of schools requiring their graduates to be computer literate. This conclusion is consistent with the literature.

In general, recruitment efforts at middle and high schools yield only a small number of qualified applicants; nevertheless, the number of newly hired business educators has increased dramatically since 1993.

Middle and high school principals perceive their business education programs favorably. They offer comprehensive business education programs. For instance, course offerings include those in the functional areas as well as the service area. The majority of the courses in the programs, however, pertain to technology. Administrators appear to be supportive of these courses; they have formal plans for the replacement of hardware and software and allocate funds for this purpose.

Based on these conclusions, the following recommendations are offered:

1. Continue to offer both the B. S. degree and the waiver program in business education.
2. Revise the areas of specialization to reflect the popular courses (technology, functional, and service) that are offered in middle and high schools.
3. Develop and implement a recruitment plan publicizing the anticipated demand by region to attract students throughout California into the business teacher education program.
4. Incorporate distance learning tools and techniques so that the curriculum is accessible to prospective students throughout the state.

This study has implications for further research; studies could be undertaken to:

1. Determine the number of schools that have business education programs within other programs and identify the structure. Specifically, some respondents commented that their business curriculum is offered in Tech Prep and Regional Occupational Programs; other respondents revealed that their schools have interdisciplinary curricula in which business subjects are integrated into other courses.
2. Identify how administrators plan for and acquire hardware and software.
3. Identify those schools that have outstanding business programs; determine the characteristics that make them outstanding.
4. Finally, investigate requirements concerning computer literacy among graduates.

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21st Century Entry-Level Computer Skills Needed by Fortune 500 and Small Business Employees in Central Ohio

Anthony A. Olinzock, Mississippi State University, Mississippi State, Mississippi
Paul J. Lazarony, California State University, Northridge, Northridge, California

ABSTRACT

This study was conducted to determine what computer skills and computer application skills human resource managers believe are needed by today's entry-level employee at both small businesses and Fortune 500 companies in Central Ohio. A secondary purpose of the study was to examine differences and relationships related to entry-level skill requirements based on various characteristics of the companies. A total of 1,987 small businesses and 7 Fortune 500 companies represent the target population for the study.

Participants from small business and Fortune 500 companies did not agree on the necessary computer skills or the necessary computer applications skills needed by entry-level employees. Overwhelmingly, however, the participants agreed that programming ability was not a necessary skill.

The participants indicated that they used a variety of hardware, with Windows® the primary operating system. They also indicated that generally entry-level employees required about three days of additional training, and this training was typically provided in-house. Not only were significant differences found between small businesses and Fortune 500 companies, the size of the business in terms of the number of employees impacted on the computer and applications skills perceived to be necessary for entry-level employees.

The findings of the study offer educators direction for meaningful curriculum change.

For nearly a decade, the demand for workers with information technology skills has exceeded supply. The fact that a shortage of information technology (IT) professionals currently exists is alarming, considering the forecast of the White House that " by the year 2000, nearly 60% of all jobs will require information technology skills (The White House, 1998). Compounding this problem is the possibility that:

Failure to address this shortage of information technology professionals could slow down the red hot growth of the informational technology sector—one of the engines of America's economic expansion and job creation. (Gore Backs National IT Workers Shortage, 1997).

Today, Information Technology (IT) permeates every sector of the economy, and IT workers represent key employees everywhere, even in traditional industries such as auto, steel, and agriculture (Agency Recruits Medal Winners to Emphasize Info-Tech Skills, 1998). Educators are challenged to develop curricula that will enable graduates to enter the business world prepared to meet the demands of a "high skills/high wages" workforce. Researchers have been investigating the relationship between the demands of business and the education curricula for many decades. Because of the ever-increasing speed at which new technology is introduced, developing relevant curricula today is even more important than in the past.

In separate studies Margot (1992), and Lifer, J.D. (1992) compared the computer skills taught in secondary business programs, postsecondary business administration programs, and the requirements of Fortune 500 companies. The findings of both studies indicated that differences exist between what is taught in the classroom and what Fortune 500 companies indicated are the skills needed for employment. In Thailand, Kiattikomol (1994) also identified inconsistencies by comparing "the perceptions of large business leaders versus business school administrators, with respect to computer literacy skills." Carter (1988) conducted "an investigation into computer education offered in New Hampshire secondary schools as perceived by teachers and compared to the needs of business." This study showed that what teachers perceive as necessary computer education does not always agree with what business identifies as its needs. Steven Lifer (1997) studied the computer technology curriculum perceptions of college IT faculty versus high school IT faculty. The findings of this study indicated that educators at various education levels do not always agree on the curriculum content. All of these studies identified inconsistencies in perceived need and demonstrated the necessity to align the curriculum with the needs of business.

The current shortages in the labor force are compounded when entry-level employees lack the required technical skills. Not only does this problem cause a loss in productivity; it also significantly increases the cost of operating business. Lemming (1999) "found that most firms (in a Pennsylvania statewide poll of 800 companies) increased the amount of money spent on training of new-hires by about $150 per employee from 1996 to 1997, but that 'leading edge' firms doubled that with an average increase of $300 per new hire." Much of this training is done by

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outside training facilities. "An average training facility trains 200 to 300 people a month and offers 30 to 45 end-users (software application) classes and the cost for students ranges from $160 to $300 for a one-day class" (Gassen, 1999).

Computer skills and computer application knowledge are important competencies for entry-level employees to possess prior to employment. Crosby (1999) said "...most occupations, even outside the computer industry, require computer skills." Supporting Crosby's view is Metcalfe (1999) who states "...overall, employers are looking for workers with more and better computer skills." Metcalfe went on to say that "even cooks, order clerks, and security guards are going to need greater computer and technical skills" (1999). Lemming (1999) adds to those indicating the need to reflect on a new IT curriculum when he states "the growing business of educating and training workers reflects several trends including; the growing complexity and sophistication of entry-level jobs, many of which now require computer skills for such tasks as preparing letters and record-keeping."

PROBLEM AND PURPOSE

The review of literature supports and reinforces the need for curriculum based on workforce demands and yet highlights the many inconsistencies in the perceived needs when identified by different populations–teachers at various levels, administrators, and businesspersons. The result is an entry-level workforce lacking many basic technical skills, thus requiring businesses to invest in additional training as they bear the cost of lost productivity.

One of the purposes of this study was to determine what computer skills and computer application knowledge do today's entry-level employees (an employee with a business/technical education background and two or less years of experience) need for gaining employment in Fortune 500 companies and small businesses in central Ohio? A second purpose was to determine if differences existed between the computer skills and computer applications requirements based on the classification of the company, Fortune 500 or small business. The findings provide educators with information that will assist them in providing a curriculum that is both relevant and current.

RESEARCH QUESTIONS

The following research questions were developed to provide direction in data collection and analysis:

1. According to HR managers at Fortune 500 companies and small businesses in Central Ohio, what computer skills should prospective entry-level employees possess prior to employment?
2. According to HR managers at Fortune 500 companies and small businesses in Central Ohio, what computer applications should prospective entry-level employees know prior to employment?
3. What system software and computer hardware are currently used by Fortune 500 companies and small businesses in Central Ohio as perceived by HR managers?
4. How much (if any) additional IT training is required for entry-level employees at Fortune 500 companies and small businesses in Central Ohio as perceived by HR managers?
5. Is there a significant statistical difference between the computer skill requirements for entry-level employees as perceived by HR managers at Fortune 500 companies when compared to small businesses in Central Ohio?
6. Is there a significant statistical difference between the Application Software knowledge requirements for entry-level employees, as perceived by HR managers at Fortune 500 companies when compared to small businesses in Central Ohio?
7. Is there a significant relationship between the number of employees at a company and the computer skills requirements for entry-level employees as perceived by HR managers at small businesses and Fortune 500 companies in Central Ohio?
8. Is there a significant relationship between the number of employees at a company and the computer application software knowledge requirements for entry-level employees as perceived by HR managers at small businesses and Fortune 500 companies in Central Ohio?

LIMITATIONS

The data used in this study was collected in Spring 1999. A random sample of 129 of the HR managers from the 1,987 small businesses in Central Ohio (as listed in the Small Business Profile form Harris InfoSource International) were asked to participate in the study (Small Business Profile, 1998); and HR managers at the seven Fortune 500 companies headquartered in Central Ohio were asked to participate in the study (Fortune 500, 1999). Honesty and the knowledge of the participants as well as the validity and reliability of the instrument limit the findings.

DESIGN OF THE STUDY

This study was designed to identify the computer skills and computer applications human resource managers (or designee) perceived necessary for entry-level positions in Fortune 500 companies and small businesses located in Central Ohio in 1999. Since it was believed that some of the small businesses would not have an individual with the title "human resource manager," the researchers instructed participating companies to give the questionnaire to the individual who would perform those duties within the company typically associated with the position "human resource manager." A total of 7 Fortune 500 companies and 1,987 small businesses represented the target population for the study. All Fortune 500 companies were surveyed. Because the population of small businesses in Central Ohio was so large, the researchers used a Simple Random Sample of the total population. Using the SPSS statistical program, the researchers determined that a sample size of 129 was required based on a population of 1,987 at the 95% confidence level.

INSTRUMENTATION

The survey instrument used to collect the data was validated by a panel of experts (business people, statistical experts, and educators), and reliability was established using the test, retest procedure, r = .88). Cronbach's Alpha was used to establish the internal consistency of the instrument, a .74. An alpha level of p. $\leq$ .05 was established a priori.

All seven participants from Fortune 500 companies completed and returned usable questionnaires; 53% (n = 68) of the small business participants returned usable questionnaires. The researchers sampled the non-respondents from the small business population by telephone to determine if any significant statistical differences existed between the non-respondents and the respondents. No significant differences were found, and the researchers concluded that the sample was representative of the population.

DEMOGRAPHIS CHARACTERISTICS OF THE PARTICIPANTS

Of the small business participants, nearly 78% (n = 53) were manufacturing businesses; 15% (n = 10) were retail businesses, 10% (n = 7) were service businesses, and 24% (n = 16) indicated another category. Businesses could identify more than one category. Nearly 68% (n = 46) of the participants were male, and 32% (n = 22) were female. Half of the participants (n = 34) described their title as President or Human Resource Manager.

Of the Fortune 500 companies, 29% (n = 2) were manufacturing businesses; 29% (n = 2) were retail businesses; 29% (n = 2) were financial businesses; and 14% (n = 1) were insurance businesses. Eighty-six percent (n = 6) of the participants were female, and 14% (n = 1) were male. All Fortune 500 participants described their title as Human Resource Manager.

FINDINGS

Of all the skills listed on the survey instrument associated with using computers, the participants from small businesses indicated they believed only four were necessary for entry-level employees. The participants from Fortune 500 companies believed that twice as many of the computer skills listed on the survey instrument were necessary for entry-level employees than did the participants from small businesses. The rank order of computer skills necessary for entry-level employees in small business and Fortune 500 companies is shown in Table 1.

Both small business and Fortune 500 participants indicated that they believed three computer skills were unnecessary for entry-level employees. Participants from Fortune 500 companies also indicated that desktop publishing was an unnecessary skill for entry-level employees as shown in Table 2.

Table 3 shows that of all the application software identified on the survey instrument, the small businesses participants indicated that they believed only three applications were necessary for entry-level employees. The participants from Fortune 500 companies indicated that believed that more than twice as many of the applications were necessary for entry-level employees than did small business participants.

Small businesses indicated that only one of the applications listed on the survey instrument was unnecessary; Fortune 500 companies indicated that two applications were unnecessary as shown in Table 4.

Both small business and Fortune 500 participants indicated that they used a variety of hardware; Table 5 shows the types of hardware.

In rank order, both small businesses and Fortune 500 businesses indicated the same types of system software usage as shown in Table 6. The participants in this study did not indicate the use of any other systems software.

When asked if additional training was required for individuals assuming entry-level positions with their company, both small businesses and Fortune 500 businesses indicated that additional training was needed. Nearly 46% (n = 32) of the small businesses and 71% (n = 5) of the Fortune 500 companies indicated that additional training was needed. The small business participants indicated that from 1–4 days of

Table 1. Necessary Computer Skills for Entry-level Employees

Rank	Small Business	Fortune 500
1	System software proficiency	Basic word processing proficiency
2	Keyboarding proficiency	Basic electronic mail proficiency
3	Basic components of computer system	Basic spreadsheet proficiency
4	Basic word processing proficiency	Keyboarding proficiency
5		System software proficiency
6		Basic components of computer system
7		Computer as aid in problem solving
8		Basic Internet browser proficiency

Table 2. Unnecessary Computer Skills

Rank	Small Business	Fortune 500
1	Author an Internet Web page using HTML	Author an Internet Web page using HTML
2	Integration of multimedia sound or video files	Integration of multimedia sound or video files
3	Basic computer programming concepts	Basic computer programming concepts
4		Desktop publishing proficiency

Table 3. Necessary Computer Application Skills for Entry-Level Employees

Rank	Small Business	Fortune 500
1	Word processing	Word processing
2	Electronic spreadsheet	Electronic mail
3	Accounting software	Electronic spreadsheet
4		Accounting software
5		Scheduling software
6		Database management
7		Presentation graphics

additional training was needed; Fortune 500 companies indicated that 2–3 days of additional training was needed. In both small businesses and Fortune 500 companies, the majority of the necessary training was done in-house.

Small businesses and Fortune 500 businesses differed significantly in the importance they placed on seven different computer skills/applications, $p \leq .05$. Table 7 shows these skills. In all cases, the participants from Fortune 500 companies viewed the skills to be more necessary than did the small businesses. Respondents rated their perception of the importance for various skills on a Likert Scale ranging from 1 (unnecessary) to 5 (very necessary).

The researchers used the Pearson Product Moment Correlation to identify relationships and found significant, low, to moderate positive level relationships ($r = .26$ to $r = .43$) between the size of the company in terms of annual revenue and the skills/applications. The annual revenue for the participating small businesses ranged from less than $500,000 to $500 million.

- Electronic Spreadsheets
- Computer as an Aid in Problem Solving
- Basic Components of a Computer System
- Basic Electronic Spreadsheet Proficiency

Participants from the larger of the small businesses tended to rate these skills/applications as being more important than did participants from those that were smaller.

The researchers found significant, very strong level, negative relationships ($r = .77$ to $r = .96$) between the size of the Fortune 500 company in terms of annual revenue and the skills/applications. The annual revenue for the Fortune 500 businesses ranged from $2,647 million to $12,358 million.

- Basic Word Processing Proficiency
- Basic Electronic Mail Proficiency
- Scheduling Software
- Accounting Software
- Presentations Graphics Proficiency
- Systems Software Proficiency

Participants from larger Fortune 500 companies tended to rate these skills/applications as being less important for entry-level employees than did participants from smaller Fortune 500 companies.

Both small businesses and Fortune 500 companies overwhelmingly agreed that basic computer literacy and the ability to use application software were minimal but adequate skills for entry-level employees. Only 13% ($n = 9$) of the small business indicated that some programming ability would be desirable; none of the Fortune 500 companies indicated that any programming ability was necessary for entry-level employees.

Both small businesses and Fortune 500 businesses indicated that word processing was the strongest skill possessed by entry-level employees. Small businesses indicated the three weakest skills of entry-level employees were the ability to use spreadsheet software, database software, and accounting software. Fortune 500 companies indicated the three weakest skills of entry-level employees were the ability to use spreadsheet software; the ability to use database management software, and basic computer skills.

When asked what additional instruction should be provided for entry-level employees, the small businesses rated Windows® Systems as the most needed skill; Fortune 500 companies rated presentation software as the most needed skill.

Table 4. Unnecessary Computer Application Skills

Rank	Small Business	Fortune 500
1	Online chat	Online chat
2		HTML editor

Table 5. Hardware Usage

Rank	Small Business	Fortune 500
1	Personal computer, PC	Personal computer, PC
2	Notebooks or portables	Notebooks or portables
3	Mainframe with workstations	Mainframe with workstations
4		Minicomputer

Table 6. Operating Systems Used by Small Businesses and Fortune 500 Businesses

Rank	Small Business	Fortune 500
1	Windows® 3.1/95/98	Windows® 3.1/95/98
2	Windows® NT	Windows® NT
3	Macintosh® OS	Macintosh® OS

Table 7. Skills Rated Significantly Different Between Small Businesses and Fortune 500 Companies

Rank	Computer Skill	Small Business Mean	Fortune 500 Mean	t	p.
1	Basic electronic mail proficiency	3.37	4.71	-6.35	.01
2	Basic word processing proficiency	3.59	4.71	-5.33	.01
3	Basic spreadsheet proficiency	3.46	4.43	-3.03	.05
4	Keyboarding proficiency	3.76	4.43	-2.02	.05
5	Basic Internet browser proficiency	2.82	3.57	-2.02	.05
6	Local area network or intranet proficiency	2.72	3.43	-2.21	.05
7	Electronic bulletin boards	2.59	3.43	-2.55	.01

CONCLUSIONS

Both small businesses and Fortune 500 companies believe that basic computer literacy and the ability to use applications software are necessary for entry-level employment. They also view basic keyboarding ability as a fundamental skill. Few participants indicated any need for programming ability. Fortune 500 companies tended to expect entry-level employees to have skill in the use of more types of applications software than did small businesses. One possible explanation for the finding might be that these larger companies link their employees through an electronic communications network that requires knowledge of basic applications software.

When analyzing the businesses by size, it was found that the larger the small business, the more likely it was to indicate that specific software applications were necessary. One

explanation for this finding might be that larger small businesses are more likely to have more sophisticated computer systems, making it necessary for entry-level employees to have specific skills. When analyzing Fortune 500 businesses, the researchers found that the larger the business, the less likely a respondent would indicate that specific software was necessary for entry-level employees. This finding might reflect more specialization in very large businesses, requiring employees to be competent in specific areas rather than requiring all employees to have the same basic skills in a number of areas. This finding seems to indicate that the size of the company might impact the need for entry-level employees to possess specific skills.

Both small businesses and Fortune 500 companies use a variety of hardware; however, both small businesses and Fortune 500 companies use Windows® as the predominant operating system. Educators and trainers should consider using a variety of hardware.

Both small businesses and Fortune 500 businesses indicated that entry-level employees need additional training, somewhere between 1–4 days at an average cost ranging from $187 to $240 per day per employee. This represents a significant expenditure for businesses. Educators and trainers should explore ways of decreasing the need for this training and/or a means of delivering the training more efficiently.

RECOMMENDATIONS

Although the findings of this study are limited by its design, these findings do provide direction for educators in their development of curricula. It is recommended that educators:

- Emphasize that businesses, based on such factors as size and location, may demand different entry-level skills. The most common skills required by small businesses and/or Fortune 500 companies included:
  - Word processing
  - Electronic mail
  - Spreadsheets
  - Keyboarding
  - Software proficiency
  - Spreadsheets
  - Database management
  - Accounting
  - Scheduling
- Emphasize that businesses use both desktop and notebook computers running a version of Windows® systems software. Educators are encouraged to expose their students to such hardware and software.
- Emphasize that businesses required entry-level employees to use spreadsheet, database, and graphic applications software and Windows® system software. These businesses also indicated that the ability to use this software represented the weakest skill competencies of entry-level employees. Since competence in this software is required of entry-level employees, educators are encouraged to emphasize these applications in their curricula.

Today, as educators and business people focus on workforce development, the findings of this study offer some direction for meaningful curriculum change.

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An Analysis of the Status of Internet Usage Policy Among AACSB Schools

Linda F. Szul and Bill McPherson, Indiana University of Pennsylvania, Indiana, Pennsylvania

ABSTRACT

Advances in technology are making it easier to communicate faster and more effectively; however, privacy in this electronic communications environment is a complicated issue. Implementing a policy to address the electronic communications in the workplace is critical. This study was completed to determine if postsecondary institutions have an Internet usage policy; how it was developed, communicated, and enforced; and what are the common misuses of the Internet. Schools of business accredited by AACSB—The International Association for Management Education—were surveyed. Findings show that a majority of respondent schools do have an established policy, the administration was primarily responsible for creating the policy, the policy was communicated using both traditional and nontraditional methods of communication, and a substantial majority use the honor system to monitor employee use. Recommendations include establishing a policy for all educational institutions and communicating the policy in writing.

In today's fast-paced, ever changing technological world, it is becoming easier to communicate faster and more effectively than ever before. The introduction of the electronic telephone and the Internet make it possible to communicate with anyone anywhere, at any time, and in most cases instantaneously.

"One of the more popular and fast growing areas in computing today is the Internet. Using the Internet enables people to do research, get stock quotes, shop for services and merchandise, display weather maps, obtain pictures, movies, and audio clips stored on computers from around the world, and converse with people on other continents" (Shelly, Cashman, & Jordan, 1996, p. 1.2). Once considered mysterious, the Internet is now accessible to the general public because personal computers with user-friendly tools have reduced its complexity. To be considered knowledgeable about computer technology in today's world, being Internet-literate is almost a requirement (Long & Long, 1996).

The accessibility of the Internet has mandated a discussion of issues surrounding both use and privacy. Privacy in the electronic communications environment is a complicated issue. According to a survey of 300 businesses encompassing multiple industries reported in *Work Life Report*, "more than 20% of these firms engage in searches of employee computer files, voice mail, electronic mail or network searches" (Glassberg, Kettinger, & Logan, 1996). Another survey by the Human Resource Management Association stated that 80% of organizations communicate and share information using e-mail, but only 34% have policies addressing proper e-mail usage (Caudron, 1996).

Implementing a policy to address the electronic communications in the workplace is critical. Most authors and consultants agree that it is an absolute necessity for an employer to have a formal electronic communication policy in place. The policy should deal with guidelines for access, use, and disclosure and should formally advise each employee and prospective employee of that policy (Kirkpatrick & Lockhart, 1994).

REVIEW OF LITERATURE

The literature review will address three relevant areas concerning the policy issue: current laws relating to privacy and security, the emerging conflict of interest between employee privacy and employer security, and the actual form and communication of the Internet Usage Policy.

Current Laws

During the last decades several laws have been introduced to secure an individual's and entity's rights to free and private communications. The first one in the modern era was Title I of the Omnibus Crime Control and Safe Streets Act of 1968, which was intended to deal with increasing threats to privacy resulting from the growing use of sophisticated electronic monitoring devices that threatened the average citizen's reasonable expectation of privacy (Posch, 1996).

In 1986 legislation was updated, and the Electronic Communications Privacy was passed as an amendment to the Omnibus law. Prior to 1986, Title II pertained only to wire and oral communications. The update expanded to include electronic communications. Under the Electronic Communications Policy Act, electronic communications is defined as "any transfer of signs, signals, writing, images, sounds, data or intelligence of any nature transmitted in whole or in part by wire, radio, electromagnetic, photoelectric, or photo-optical system that affects interstate commerce. (Burkhardt & Dichter,

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1996). Electronic mail was to be regarded in the same category as messages delivered by the U.S. Postal Service; therefore, tampering with, interfering with, or intercepting another user's e-mail is illegal and is protected by the Electronic Communications Privacy Act (CoVis, 1997). In both occasions employees were granted an exemption for in-house systems allowing them to review and inspect employee communications."

The state tort law that courts may address concerning electronic mail interception by employers is "unreasonable intrusion upon seclusion of another" (Burkhardt & Dichter, 1996). Courts generally evaluate two areas when determining employer liability under this tort: (1) plaintiff's reasonable expectation of privacy, and (2) employer's justification for monitoring or intercepting an employee's electronic mail message (Burkhart & Dichter, 1996).

Two proposed acts would further enhance the security of electronic communications. The proposed Encrypted Communications Privacy Act of 1995 would enhance the global competitiveness of high-tech industries allowing more secure transmissions. The proposed Privacy for Consumers and Workers Act of 1993 places limitations on employer monitoring of its employees depending upon how long the employee has been with the company (Kirkpatrick & Lockhart, 1994, p. 4). These bills have not yet been signed into law.

Conflict of Interest

Privacy is a right guaranteed to all citizens. This right is embodied in our constitution—protected by the First, Fourth, and Fifth Amendments. Employees of a company and users of organizational computing resources expect privacy when using electronic communications such as e-mail, facsimile, voice mail, and the Internet.

The issue really is whether or not an employee's reasonable expectation of privacy is outweighed by a company's legitimate business concerns (Caudron, 1996).

Because electronic mail is an informal means of communication and passwords are generally required to access an individual's account, employees perceive electronic mail to be a private means of communication and, as a result, write things in their messages they would not normally write knowing who can actually read the messages (Lynch, 1996). It is necessary to remember that in the eyes of the court, electronic impulses stored as e-mail documents and voice mail messages constitute legal documents (Olmsted, 1996). However, the protection of individual privacy in regard to electronic mail correspondence transmitted over an employer's internally owned system is practically nonexistent. As a result, employers are encouraged to address issues of privacy (Burkhardt & Dichter, 1996). Providing employees with a policy statement addressing issues of privacy and record retention can easily cure this misunderstanding. The policy should caution employees that deleting files might not entirely eliminate the files from the system (Beige, 1996). Furthermore, employees must understand that the use of passwords does not indicate that a message is confidential (Caudron, 1996). Policies stating the retention time for electronically stored data will help minimize both the legal consequences to employers and the embarrassment to employees that may result from storing electronic mail over long duration (Glassberg, Kettinger, & Logan, 1996).

Technology can increase the possibility that confidential financial information can get in the wrong hands (Caudron, 1996). An electronic mail is considered "discoverable material" and, as a result, can pose a legal threat to the system's rights to privacy and protection. Businesses, however, were granted an exemption under the law to allow them to protect trade secrets and other sensitive information. An employer can easily eliminate an employee's expectation of privacy by communicating his or her intentions in an electronic communication policy and making that policy known. The law does not guarantee an individual's personal privacy in regard to internal electronic mail systems. There are no legal restrictions preventing an employer from monitoring electronic mail or reading electronic mail of an employee without the employee's consent. Generally, an employer can choose to deal with the subject of monitoring electronic mail at his or her own discretion (E-mail privacy, 1996).

Policy Form and Communication

Employment lawyers agree the best way to protect your company's interests in this new electronic age is through the development of a well-crafted policy (Caudron, 1996). However, consensus has not been reached on the items to be included in the policy and the method(s) to be used to communicate the policy.

According to Stiefer (2000), electronic communication tools including e-mail, the Internet, and workflow software have revolutionized the way organizations do business both internally and externally. There are concerns that employers must address when working with this technology; the most important is to ensure that employees use electronic media in the way it is intended. The purpose of an electronic communication policy is to discuss privacy rights, access and disclosure of information, and resource management (Burkhardt & Dichter, 1996). In general, a policy should address four areas: data security procedures, virus awareness, e-mail access and use, and external access (Stipe, 1996).

Because online communication is fluid, and much of the personal information sent into cyberspace in the form of e-mail messages can be easily tracked and stored by others, including the government, Beeson offers the following advice on the types of questions that should be addressed when developing an effective Internet policy:

1. Is there expectation of privacy when communicating by private e-mail or through other private online forms? Against whom—other users, the government, your Internet Service Provider, your boss?
2. Are transmissions to and from mailing lists, net newsgroups, chat rooms, and the web protected from unwarranted intrusion?
3. Can the policy seize your entire computer system if they suspect you of transmitting illegal material?
4. Do they need a warrant?
5. Do you have any recourse if your employer reveals your private messages to the company? (Beeson, 1996, p. 1).

According to Sipe (1996), the opening statements of the policy must clearly define what is covered by the policy and to whom the policy applies. In essence the opening establishes the purpose of the policy and provides examples to the employees to remove any doubt on why the policy is needed and to whom it applies. Primarily, the policy should address the issue of whether or not the organization will be monitoring employee messages.

The second element of the policy should make employees aware of the fact that all forms of communication are tools of the business. The company owns the tools and at times incidental personal use is acceptable. There are two distinct possibilities in this area. First, personal use can be limited to incidental and minimal amounts. Second, personal use can be prohibited completely. The first, also known as the honor principle, usually works better. After an initial period of exploration and personal overuse, there should be a noticeable decline in the number of personal messages and contacts created. A recent study by Forrester Research Inc. indicated that employees' non-business use of the Internet usually levels off to less than 20% after the first few months of exposure (Hannon, 1997). Employees will probably appreciate the trust they are given. Further, it is likely they will stumble upon something truly useful in a business sense while looking around the vast Internet (Hannon, 1997).

According to D. Michael Underhill, an employment and labor law attorney with Morgan, Lewis, and Bockius, LLP, in Washington, D.C., a well-crafted policy should include the following factors (Caudron, 1996):

1. Statement that electronic- and voice-mail systems are company property
2. Rules of usage
3. Explanation of monitoring practices
4. Reasons for monitoring
5. Employee consent

Basing any policy solely on legislation could lead to problems. Some of this can be attributed to the fact that workplace privacy is a sticky issue regardless of the side of the fence you are on (Caudron, 1996). There are always ethical issues to consider. Naturally, the standard rules of etiquette and common courtesy should apply.

Most lawyers agree that the safest course of action for an employer is to have a policy and follow it. This e-mail policy should be a clear, specific, written policy. The benefits of a written policy (Adams, Scheuing, & Feeley, 2000) are (1) it sets the boundaries for employee use of e-mail and the internet, and (2) it puts an employee on notice that the employer will monitor the use of its computer equipment and electronic services. A copy should be distributed and signed to acknowledge receipt of the document and agreement to the terms. An e-mail policy protects both the employer and employee while preventing a multitude of problems down the road.

Both formal and informal surveys of organizations have shown that although about 80% use e-mail and the Internet, only about one-third have a written policy in place (Brady, 1997). This number is sure to rise soon to 100%, and policies regarding its use need to be established and communicated to all employees.

Educators are expected to use the various forms of electronic communications to pursue academic and business-related matters. The forms of electronic communications are tools for productivity and should be treated as such. Educators are permitted such freedoms as long as the personal use of electronic communications does not result in additional costs to the institution or interfere with an employee's work responsibility.

Implementing a policy to address electronic communication in the workplace is critical in today's Electronic Age. The purpose of an electronic communication policy is to discuss privacy rights, access, and disclosure of information and resource management (Burkhardt & Dichter, 1996). According to the respondents, it is crucial that the stakeholders, including administrators, faculty, staff, and students, develop this policy as a joint effort.

Individuals enjoying academic freedom are reluctant to have sanctions imposed on the use of communications tools. Informing system users of the level of privacy that can be expected and the consequences of using electronic mail to send confidential information can lessen this reluctance.

Implementing an electronic communication policy to inform and guide employee conduct in the workplace will help minimize costly litigation for the employer and help promote a trusting work environment (Glassberg, Kettinger & Logan, 1996). Unfortunately, as we move into the next century, legislators have been reluctant to react to the information age and its implications on the workplace. In current litigation, electronic communication is viewed as discoverable material; therefore, the honor system will no longer be effective as an enforcement tool.

As of 1995, there were 62 million e-mail boxes in the United States. The Department of Transportation projected there will be more than 15 million telecommuters by 2002. By 1999, 40% of all employee communications were delivered via e-mail. But according to a recent Mercer postcard survey, only 36% of employers using e-mail had a policy (Federico, 1996). He offers the following to be included in a policy regarding electronic communication:

1. Company provides e-mail to assist in conducting business.
2. E-mail is company property.
3. No offensive or disruptive messages.
4. E-mail cannot be used to send or receive copyrighted materials.

Employees do not have the right to send or retrieve other employees' e-mail without prior approval

PURPOSE

Computer technology, specifically the Internet, has become increasingly relevant in the workplace. The ability to retrieve, sort, process, and disseminate information via the Internet is becoming a requirement in a larger number of jobs. Networked schools can provide the training that students will need in the workplace of the 21st century. Yet, in spite of this prevalence of networked computers in business, a recent Department of Education survey shows that more than

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50% of schools do not have Internet access. The survey also found that larger schools (more than 1,000 students) are more likely to have access (69%). Also of note was that schools in the Northeast had the highest percentage of access (69%). On a positive note, Internet access is up 35% from one year ago.

The purpose of this study is to determine if postsecondary institutions have an Internet usage policy; how it was developed, communicated, and enforced; and what are the common misuses of the Internet. The study will address the following questions:

1. Does your institution have an Internet usage policy?
2. Who was instrumental in creating and developing the policy?
3. How was the policy communicated?
4. How is the policy enforced?
5. What are the most common forms of Internet misuse?

METHODOLOGY

This section describes the procedures used during the study including discussion of the population, instrument, and data analysis.

Population

The population sample for the study was taken from the listing of AACSB—The International Association for Management Education—member schools for 1997-98. All colleges of businesses accredited by the AASCB were the population for the study; no schools were excluded. The survey was sent to 225 schools and addressed to the dean of the college of business; participation was voluntary.

Forty-four respondents returned the surveys; this represents a response rate of 20%. An analysis of the demographic information revealed that a substantial majority 80% (35) of the respondents are employed at a 4-year public college/university with a college of business student population under 5,000 students. Small town, suburban, urban, and metropolitan areas were equally represented. The respondents were primarily male 91% (40), with 76% (33) having more than 15 years academic experience in higher education.

This study followed a descriptive research design using survey methods with statistical treatments. In deciding which survey method is best suited for a particular piece of research, Nachmias and Nachmias (1987) stated that it is necessary to evaluate which criteria are most significant to the research objective. The design was a cross-sectional survey. Babbie (1990, p. 65) stated that the cross-sectional design is the most frequently used study design; he supports the use of this type of survey when

> . . .data are collected at one point in time from a sample selected to describe some larger population at that time. Such a survey can be used not only for purposes of description but also for the determination of relationships between variables at the time of study p. 62).

The survey method is one of the most important data collection methods in the social sciences, and as such, it is used extensively to collect information on numerous subjects of research (Nachmias and Nachmias, 1987, p. 247). If the researcher's aim is a single-time description, then a cross-sectional survey is the most appropriate. As Babbie (1990) stated, "The researcher would identify the population relevant to his interests, select a sample of respondents from the population, and conduct his survey" (p. 68). This survey modeled Babbie's statement.

Instrument

The survey instrument included selected demographic information as well as a questionnaire designed using a Likert scale with responses ranging from 1 to 5, with 5 as a high and 1 as a low. When employing survey research, one must be aware of the advantages and disadvantages of this type of research. Nachmias and Nachmias (1987), when discussing the survey method, offered, " . . .its major advantages are lower costs, relatively small biasing error, greater anonymity, and accessibility. Its disadvantages are a low response rate, opportunity for probing, and the lack of control over who completes the questionnaire" (p. 248).

In order to minimize the disadvantages of using the survey method with instrument, the "total design method" (TDM) suggested by Dillman (1978) was used as a guide. Dillman (1978) defined the TDM as, "consisting of two parts. The first [part] identifies each aspect of the survey process that may affect either the quality or quantity of responses and to shape each of them in such a way that the best possible responses are obtained. The second [part] organizes the survey efforts so that the design intentions are carried out in complete detail" (p. 12). Using Dillman's TDM helped minimize the problems of response quality and quantity. In other words, ". . .this is nothing more than the identification of each and every aspect of the survey process that may affect response quantity or quality and shaping them in a way that may encourage a good response" (p. 2).

The data in this descriptive study was collected using standard mail survey procedures as described by Dillman (1978). Each of the potential participants received a coded survey packet containing the following items:

1. Descriptive cover letter
2. Survey instrument
3. Self-addressed stamped envelope

In order to preserve the confidentiality of all survey respondents, a code number was assigned to each packet mailed.

DATA ANALYSIS

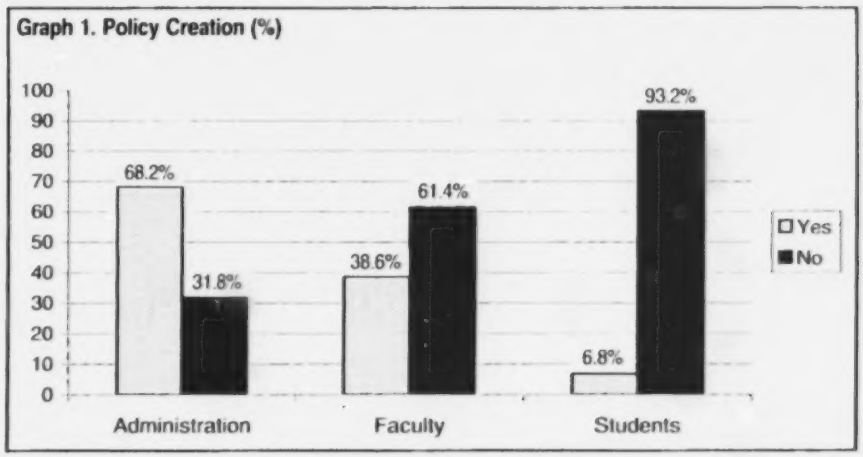
Data for scores from the Likert scale were scored through the use of the Statistical Package for the Social Sciences for Windows (SPSS+ for Microcomputers, release 4.0). Statistical tests were performed on the data, and descriptive and comparative analyses were made.

FINDINGS

The responses of the deans revealed the following information relating to Internet usage policies.

Question 1. Does your institution have an Internet usage policy? Fifty-four percent (24) of the institutions have established an Internet usage policy. Of the 54%, only 30% (13) believe that the policy is effective. Development of policies is currently underway in 32% (14) of the responding institutions, while 14% (6) have no policy or plans to develop a policy.

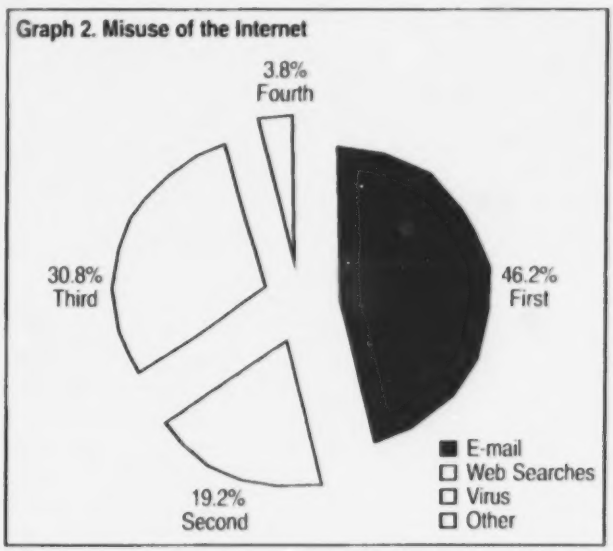
Question 2. Who was instrumental in creating and developing the policy? The respondents indicated that the administration was primarily responsible for creating the policy with some input from faculty and minimal input from students as shown in Graph 1.



Question 3. How was the policy communicated? Those respondents that answered affirmatively to having an Internet usage policy revealed that policies are communicated in several media. Thirty-two percent (14) used technology to convey the policy including a start-up screen and electronic mail. Forty-eight percent (21) used a more traditional method of communication—included verbally at meetings, small group discussion, one-on-one discussion, and written addendum to employee handbook. Twelve percent (5) indicated that there was no formal communication of the policy. Eight percent (4) did not respond to the question.

Question 4. How is the policy enforced? Eighty-four percent (37) use the honor system while 16% (7) monitor employee use of the Internet. Monitoring is completed through specific software programs, e-mail screening, or file screening. Another option for monitoring the use of the Internet is the installation of a firewall on the server. Of the 84% (37) using the honor system, 38% (17) are very satisfied, 55% (24) are satisfied, while 7% (3) are only somewhat satisfied.

Question 5. What are the most common forms of Internet misuse? Graph 2 illustrates that e-mail (46.2%) is the most common form of Internet misuse, followed by downloading of a virus (30.8%), non-work related web searches (19.2%),and other (3.8%).



As the study indicated, using the Internet to send e-mail messages for personal use is the most common misuse expressed by respondents. There are no legal restrictions preventing an employer from monitoring or reading an employee's electronic mail without that employee's consent (E-mail privacy, 1996). Although users of the system may see monitoring as a personal violation, there are numerous reasons to justify why employers choose to monitor electronic mail activity. An electronic mail record is considered "discoverable material" and, as a result, can pose a legal threat to both the system provider and careless users (Trickey, 1996).

CONCLUSIONS

The Internet is rapidly becoming a means of communicating both internally and externally for educational institutions. An analysis of the results presented leads to the following conclusions:

1. An Internet usage policy is an important agenda item for educational institutions. A majority of institutions either have a policy or are developing a policy. According to the results of this study, institutions need to establish a well-defined Internet and e-mail usage policy and publicize it. Brandenburg, Wasson, & Woodal (1999) found, "The lack of a formal and well-publicized usage policy would suggest that companies could face problems in terms of productivity loss and misuse of electronic messaging by employees. In light of complaints launched by corporations regarding improper use of e-mail or the Internet, the absence of a formal policy is risky in terms of efficiency and productivity."
2. The administration was primarily responsible for creating the policy.
3. Communication of the policy is handled in different ways. There does not appear to be a preferred method of communicating the policy to faculty and staff.

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4. Employee use of the Internet is not monitored in most educational institutions. However, those institutions that do monitor the Internet use various strategies including firewalls, file screening, and e-mail screening.
5. There are areas of concern regarding the misuse of the Internet in the educational environment. Areas of concern included the use of e-mail, non-work related Web searches, and downloading of a virus.

RECOMMENDATIONS

The increasing availability of technology in the academic world has made communication among administration, faculty, staff, and students instantaneous. Educators are increasingly using this technology for both academic and personal reasons. Several recommendations can be made concerning the results from this survey.

1. An Internet usage policy is becoming a component for educational institutions. A policy must be designed and implemented at all educational institutions.
2. The policy must be communicated to all employees. The preferable communication tool is a written document.
3. This study should be replicated in five years to determine if more institutions have developed, implemented, and communicated an Internet usage policy.
4. The study should be expanded to determine how businesses are addressing Internet usage and developing a policy.

IMPLICATIONS

Employee access to and use of electronic mail and the Internet is increasing at an extraordinary rate. According to one source, U.S. workers currently send more than one billion e-mail messages per day (Lewis, 2000). To date, federal and state law regarding the right of private employers to monitor employees use of the Internet and e-mail remains underdeveloped and is currently evolving—a bonafide Internet policy is critical for educational institutions to stay competitive.

If colleges and universities provide all students, faculty, and staff with access to a variety of technology resources and provide opportunities for all members of the community to learn to utilize these resources effectively and efficiently, they should provide opportunity for protection. In return, the college or university expects the technology usage to be conducted legally and ethically. To achieve these goals, a university must have an Internet policy in place. This policy must be developed, administered, communicated, and enforced within the entire academic community.

The results of this study clearly indicate that an Internet acceptable usage policy is critical. Furthermore, to be effective it must be properly written, clearly communicated, and appropriately enforced.

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Student Perceptions of the Effectiveness of Web-Based Courses

Robert M. Schramm, Richard J. Wagner, and Jon M. Werner, University of Wisconsin-Whitewater, Whitewater, Wisconsin

ABSTRACT

The responses of 206 students in 10 Web-based MBA courses at the University of Wisconsin-Whitewater were analyzed concerning the perceived effectiveness of this mode of course delivery. Statistical analyses were performed on five dependent variables, using six independent variables as predictors. While student evaluations were generally positive, the strongest findings concerned whether training had been sufficient for this type of course offering. Perceived technological/access difficulties were related to three of the outcome measures. Differences concerning employment and student status were also observed. Implications for this and other Internet-based courses are discussed.

There has been a dramatic increase since the 1990s in the number of graduate and undergraduate courses that are taught via distance learning (James, 1997). Many of these courses use the Internet as the primary means of communication between faculty and students, as well as among students. A recent article directed at human resource professionals discussed online master's programs at ten leading distance learning graduate schools, including Bellevue University, Colorado State University, George Washington University, Purdue University, Rochester Institute of Technology, University of Maryland, and the University of Wisconsin-Whitewater (Phillips, 1998). One point stressed by Phillips (1998) is that these "online universities" provide students with the flexibility to take classes while at the same time maintaining their work and home responsibilities. A unique feature of much online learning is "asynchronous collaboration," i.e., students and faculty can interact with each other and the course material at a time convenient to them, without the necessity of being in the same place (or even online) at the same time. This is obviously in strong contrast to the synchronous environment prevalent in most classroom settings.

Some researchers have suggested that the intensive use of technology will transform the manner in which management and business education is conducted (Alavi, Yoo, & Vogel, 1997). Alavi et al. (1997), for example, described an innovative approach by instructors at two universities to team-teach an Internet-based information technology course, with students at both universities taking the same course at the same time. They presented case study data indicating that this provided students with a superior mode of learning than what would be available in a traditional course taught by either instructor alone. Further, Fulk and DeSanctis (1995) have argued that electronic communications provide the following advantages over traditional, lecture-based education: increased speed of communication, lower costs, increased potential for media enrichment (e.g., multimedia), and ease of access to communicated messages. However, several recent authors have described the significant technological challenges that instructors face when developing and delivering online courses (Brandon & Hollingshead, 1999; Dumont, 1996; Neumann, 1998), as well as distance learning courses that are delivered to multiple sites via interactive video (Webster & Hackley, 1997).

Despite the many potential advantages of Internet-based courses, there has been a lack of systematic research on their relative effectiveness (Moesel, Dass, Werner, & Fouts, 1998). Kroder, Suess, & Sachs (1998) described issues they faced in launching a Web-based graduate course in a collaborative effort between the University of Texas-Irving and Pace University in New York. For example, both students and faculty felt the Web-based course required substantially more time than a traditional course in a classroom. Nevertheless, 80% of the students said they would take another online course in the future. James (1997) described a survey of MBA graduates of the University of Wisconsin-Whitewater which analyzed their reactions to a planned emphasis using online course offerings.

In the search of the literature to date on distance learning, only limited research which focused mainly on student reactions to this new form of course delivery was found (University of Idaho, 1995). For example, Sherry, Fulford, and Zhang (1998) devised a measure of satisfaction with instruction for distance learners. Arbaugh (2000a) found that perceived usefulness of the learning software as well as the perceived flexibility of taking courses online were both related to student satisfaction with their online courses. Further, Arbaugh (2000b) compared students in an online versus a classroom section of a strategic management course. There were no significant differences between the two formats in perceived instructor-student interaction or discussion quality,

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as well as no significant differences in performance on an objective measure of student learning.

The purpose of this study was to examine various student perceptions concerning the effectiveness of Online courses in an MBA program. This goal was accomplished by administering a survey to students who have taken classes in an Online MBA program. This manuscript describes the development and evaluation of the first MBA courses to be offered online at the same university described by James (1997). The results highlight both the challenges as well as the prospects of online course offerings.

METHOD

Sample

The sample population for this study consisted of students enrolled in courses for the Online MBA program at the University of Wisconsin-Whitewater during the Fall 1998, Spring 1999, and Fall 1999 semesters. The survey was given to 206 students in 10 different MBA classes, all of whom met electronically. Of the 206: 91.1% were MBA students, with 8.9% in other graduate programs; 31.2% were full-time students, and 68.8% were part-time students; 73.0% were employed full-time, 16.2% were employed part-time, and 10.8% were not employed; of those employed, 85.3% were employed in career jobs, 14.7% were employed in jobs that they did not see as, "career-oriented." As to how they accessed the course, only 2.1% used the university computer lab, 17.1% used their office computer and 80.8% accessed the course from their home computers.

Delivery Tools

The University of Wisconsin-Whitewater began planning an Online MBA program in the Fall of 1996. After researching several long-distance delivery systems, LearningSpace from the Lotus Corporation was selected as the primary instructional tool. LearningSpace includes five work areas: schedule, MediaCenter, CourseRoom, profile and assessment manager (IBM, 1996). These will be described briefly.

Schedule. Schedule presents the instructional design and structure for the course as created by an instructor. From here, students are presented with a syllabus, learning objectives, exercises and reading materials. The Schedule can be designed on a modular or weekly basis. Schedule allows the instructor to structure the course around specific time frames, or provide a self-paced learning environment.

MediaCenter. The MediaCenter serves as the shared resource center, providing students with URL links, video clips, audio presentations, graphics, computer-based training, simulations, and other multimedia applications. The MediaCenter can also allow instructors the ability to present additional information beyond assigned course content to allow students to explore intuitively and hopefully learn in a way that is consistent with individual learning styles and needs (Kolb, 1984).

CourseRoom. The CourseRoom is an interactive learning environment in which students have discussions among themselves and with the instructor, as well as collaborate on team assignments. The CourseRoom allows asynchronous discussion among team members and with the instructor in a private or public environment.

Profiles. Profiles serves as a "home page" for students. In their respective Profiles, students can provide as much information about themselves as they wish. Common information provided includes contact information, photographs, education, experience, and interests. Profile allows students to understand their virtual classmates better and to identify students with similar interests in the class.

Assessment Manager. This is an evaluation tool for instructors to privately test and give feedback on student performance. Surveys, exams, quizzes, and self-study tests can be posted in the Schedule for students and can be e-mailed back into the Assessment Manager module for private review by the instructor.

Learning Support Systems and System Access

All classes were taught entirely online using LearningSpace. In addition, students purchased a CD-ROM developed by the instructors that included audio, video, and PowerPoint files to support learning. Students also had access to the instructor and other students through e-mail, telephone, and in some cases person-to-person conversations. Specific software training was available using a 90-minute videotape.

In LearningSpace, students can access courses using an Internet browser such as Netscape or Windows Explorer or they can access the course using a Lotus client. The Lotus client is loaded directly on the computer hard drive for faster access to the program.

Evaluation Survey

A survey was given to students at the end of each semester. As independent variables, six issues were tested to determine their impact on student perceptions of the online course experience. These are:

1. Perceptions that training was sufficient
2. Perceived problems accessing the course
3. Accessing the course via the notes client server vs. an Internet browser
4. Accessing the course from home, school, or work
5. Part-time vs. full time employment status
6. Attending school part-time vs. full-time.

For the dependent variables, a factor analysis of the 31 remaining questions on the survey revealed five major issues. The results of the factor analysis can be seen in Table 1. The items that loaded on each factor can be found in the Appendix.

Most issues were rated on a 7-point Likert scale, with 1 as low and 7 as high on that issue. Recommending the course to others was rated on a yes/no basis, with yes being a 1 and 2 being a no.

Statistical Analysis

T-tests were used to determine statistical significance for dichotomous independent variables. ANOVA was used to determine significance when independent variables had three response options. Correlations were used for percentage

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Table 1. Factor Analysis of Items for Dependent Variables

Factor	Eigenvalue	% Variance Explained	Cumulative Variance Explained
Level of communication with instructor	7.128	28.510	28.510
Level of technical expertise and assistance needed	2.608	10.433	38.943
Interactions with other students	1.960	7.841	46.784
Effectiveness of delivery method	1.621	6.486	53.269
Likelihood that you would recommend this course to others	1.383	5.533	59.237

responses. Given the exploratory nature of this study, p values of .05 and .10 were used.

FINDINGS AND DISCUSSION

1. Does the amount of technical training received impact student perceptions?

Students were asked whether they felt that they had received sufficient technical training for an online course. This included an evaluation of their own technical preparation for the course and the effectiveness of the 90-minute training video. T-tests were run comparing those who thought they received sufficient technical training (yes) to those who did not (no) on the five major issues previously discussed. The results are presented in Table 2.

Table 2. Impact of Perceived Amount of Technical Training on Student Perceptions

Issue	Sufficient Training	N	Mean	S.D.	T	Signif.
Level of communication with instructor	Yes	128	5.78	1.51	2.97	.003*
	No	41	5.02	1.05		
Level of technical expertise and assistance needed	Yes	92	4.52	0.99	0.915	.362
	No	38	4.34	0.99		
Interactions with other students	Yes	129	5.03	1.32	1.810	.072+
	No	41	4.60	1.43		
Effectiveness of delivery method	Yes	130	5.19	1.80	3.143	.002*
	No	41	4.15	2.02		
Recommend course to others	Yes	106	1.22	0.41	-0.816	.416
	No	39	1.28	0.46		

*Significant, p < .05
+Significant, p < .10

Students who felt they received adequate technological training had more positive feelings concerning the five issues studied. Statistically significant differences were found concerning the level of communication with the instructor and the perceived effectiveness of the delivery method, such that those who felt that they had been adequately trained were more positive about both issues. Interestingly, the relationship between training and interaction with other students approached statistical significance. Students who felt more positively about the training were more likely to be positive about interaction with other students. It should be noted that students in general had overall positive perceptions concerning each category, i.e., the first four dependent variables were measured using a seven-point scale, and all means were above 4.0. The last variable, "recommend course to others," was measured using a yes/no item, thus ranging from 1 to 2. This may explain why there was little difference between the groups concerning whether or not the students would recommend the course to others.

2. Do access problems impact students' views of online courses?

Students were asked how often they had difficulty accessing the course via their computer and speculated that increased access problems would make a difference in how their courses were perceived. Students rated this on a 6-point scale, from "never had a problem," to "had a problem over 50% of the time." An analysis was done using a one-way ANOVA. The results are shown in Table 3.

Table 3. Impact of Access Problems on Student Perceptions

Issue	N	Square of Sums	df	Mean Square	T	Signif.
Level of communication with instructor	195	20.21	6	3.368	1.836	.094+
Level of technical expertise and assistance needed	143	15.51	6	2.584	2.801	.014*
Interactions with other students	196	18.77	6	3.129	1.781	.105
Effectiveness of delivery method	135	4.41	6	0.734	1.559	.164
Recommend course to others	144	2.04	6	0.341	2.005	.069+

*Significant, p < .05
+Significant, p < .10

Experience has proven that ease of student access is a critical factor for online courses. Students (and faculty) quickly get frustrated with new technology that does not work properly or is not user-friendly. Moesel et al. (1998) suggested students who had greater problems accessing the course were less positive about online courses. The student's ability to access the course was significantly related to the perceived level of technical expertise needed for the course. Additionally, the relationship between access problems and two other variables approaches statistical significance; namely, level of communication with the instructor and recommending the course to others were both more positive when access problems were less of a problem.

3. Does the use of the Notes client versus the Internet to access their course impact student perceptions?

Students were able to access courses in two ways, via Lotus Notes off their hard drive or via the Internet. Does the method of access make a difference? Since students could access the course using both methods at different times, they were asked what percentage of the time they accessed the course using Notes (100% means that is the only way they access the course, 50% means they do it via Notes one-half the time and via the Web the other half of the time). We found that 95 students (46.1%) used Notes only, 41 (19.9%) used the Internet only, and 70 (34%) used both. Of those using both, the mean usage was 52.1% Notes and 47.9% Internet usage. Correlations were done to analyze the impact of using Notes versus using the Internet on our dependent variables. The results are presented in Table 4.

Table 4. Impact of Use of Notes Client Versus the Internet on Student Perceptions

Issue	N	Pearson Correlations	Signif.
Level of communication with instructor	200	.062	.396
Level of technical expertise and assistance needed	138	-.008	.930
Interactions with other students	199	-.008	.909
Effectiveness of delivery method	200	.041	.574
Recommend course to others	194	.130	.124

*Significant, p < .05

None of the dependent variables were significantly related to whether students used the Notes client versus the Internet to access their course. This is surprising, given the delays that often occur when students must use the Internet to access their courses. However, for this sample at least, means of access was not strongly related to any of the outcome measures.

4. Does accessing a course at home, work, or school impact student perceptions?

Students can access these courses from any location, but generally they do it from home, at work, or from a campus computer lab. Does this make a difference? An analysis was done using a one-way ANOVA (this analysis excluded the campus computer lab - since very few students used this method of access). The results are shown in Table 5.

Table 5. Impact of Place of Access on Student Perceptions

Issue	N	Square of Sums	df	Mean Square	F	Signif.
Level of communication with instructor	182	0.44	2	0.220	0.111	.895
Level of technical expertise and assistance needed	128	5.74	2	2.870	2.852	.061*
Interactions with other students	183	4.10	2	2.050	1.091	.338
Effectiveness of delivery method	133	1.06	2	0.527	0.354	.354
Recommend course to others	134	1.32	2	.661	3.871	.023*

*Significant, p < .05
*Significant, p < .10

How students access the course was significantly related to their willingness to recommend the course to others, with students who could access the course from work more likely to recommend the course to others. Additionally, students who could access their courses from work were more positive about the level of technical expertise needed, although this relationship only approached statistical significance (p= .06). One of the many benefits of online courses is the time flexibility. Students who can access their course prior to work, during a mid-day break, or after work appear to find this flexibility to be a great benefit.

5. Are student perceptions impacted by employment status?

Students were asked whether they were employed full-time, part-time, or not employed. An analysis was done using a one-way ANOVA. The results are shown in Table 6.

Table 6. Impact of Employment Status on Student Perceptions

Issue	N	Square of Sums	df	Mean Square	F	Signif.
Level of communication with instructor	199	1.79	2	0.896	.465	.629
Level of technical expertise and assistance needed	137	3.24	2	1.621	1.659	.194
Interactions with other students	200	1.28	2	0.639	.354	.702
Effectiveness of delivery method	145	2.32	2	1.158	2.476	.088*
Recommend course to others	146	1.38	2	0.689	4.007	.020*

*Significant, p < .05
*Significant, p < .10

In general, student's employed full-time had more positive attitudes towards online courses. Full-time employment status significantly impacted whether or not students would recommend the course to others. Further, the relationship between full-time work status and the perceived effectiveness of the delivery method approached significance (p= .088). This could also relate to the issue of flexibility, mentioned in Research Question #4. Full-time workers taking a graduate program at night value the ability to fit the course of study into their schedule and thus develop more positive perceptions of a program that allows for this flexibility. Full-time workers also don't have the time to "learn how to do it," so sufficient training and assistance is more critical to them.

6. Are student perceptions impacted by full- versus part-time student status?

Students who take graduate courses at UW-Whitewater attend classes either full-time or part-time. This is true of both classroom and online classes. Does this distinction make a difference in how online courses are viewed? To answer this, t-tests were run to compare part-time and full-time students on the five issues previously identified. The results are presented in Table 7.

As expected, part-time students generally perceived online courses more positively than full-time students do.

Table 7. Impact of Full- Versus Part-Time Student Status on Student Perceptions

Issue	Status	N	Mean	S.D.	R	Signif.
Level of communication with instructor	Part-time	137	5.73	1.47	1.138	.256
	Full-time	61	5.49	1.17		
Level of technical expertise and assistance needed	Part-time	97	4.52	0.96	1.021	.309
	Full-time	40	4.33	1.07		
Interactions with other students	Part-time	137	4.13	2.06	-2.062	.041*
	Full-time	62	4.76	1.81		
Effectiveness of delivery method	Part-time	138	5.27	1.82	2.730	.007*
	Full-time	62	4.50	1.88		
Recommend course to others	Part-time	103	1.17	0.37	-2.873	.005*
	Full-time	42	1.38	0.49		

*Significant, $p < .05$

Part-time students were significantly more positive about the online approach as an effective delivery method and were more likely to recommend the course to others. Although not statistically significant, part-time students held more positive feelings concerning level of communication with the instructor and level of technical expertise required. These findings support current literature that suggests that one of the major benefits of online courses is that active people can benefit from the time flexibility of online courses. Online courses allow students to do course assignments when work, family, and other responsibilities are not as pressing (Phillips, 1998). On the other hand, full-time students did hold significantly more positive perceptions concerning interactions with other students. This is likely because full-time students were on campus for other classes and therefore were able to meet in person with each other for group projects and other assignments.

CONCLUSIONS AND RECOMMENDATIONS

Although data collection is ongoing, a number of initial conclusions can be made based upon results to date. First, it is imperative that students receive adequate training before beginning an online course. Students who felt that such training was inadequate reported lower levels of communication with their instructors, rated the online technology as a less effective method of delivery, and also rated interaction with other students lower. Much computer training is either self-paced or lecture-oriented, although neither of these approaches appears to maximize learning for the greatest number of trainees (Simon & Werner, 1996). Providers of online courses must take great care to provide high quality training to all students *before* they begin such course work. Some of the strongest results obtained in this study concerned the impact of training on our outcome variables. While this is consistent with findings for training programs in general, it would seem to be particularly salient for computer-related training (DeSimone & Harris, 1998).

A second point concerns access problems. In a very real sense, access is the gateway to online courses, i.e., without access, there can be no online course experience. In this study, students who reported greater problems accessing the technology also reported less communication with their instructor, greater technical expertise required for such course work, and they were less likely to recommend the course to others. Access problems have eased since online courses were first offered at the University of Wisconsin-Whitewater. However, it is clear that strong negative reactions can be expected when students experience problems accessing the technology (Moesel et al., 1998). Providers of online courses must "go the extra mile" to ensure that such problems are kept to a minimum.

No significant differences were observed for students accessing their courses using the Notes client versus an Internet browser. As a practical matter, UW-Whitewater recommends that all students use the Notes client, which is a much faster and more efficient means of accessing the material. Concerning place of access, it is interesting to note that accessing LearningSpace from a work computer significantly impacted whether students would recommend the course to others. In general, however, place of access had little impact on student perceptions.

Students who were either employed full-time or classified themselves as part-time students were more likely to provide higher ratings on our dependent variables than the full-time MBA students. This is not unexpected, given that the program was initiated specifically for the purpose of reaching just such an audience of working individuals (James, 1997). Nonetheless, it is encouraging to see that such students were more likely to rate this as an effective method of delivery and to recommend online courses to others. This sample of employed students appears to have the attributes necessary for success in an online environment, e.g., independence and comfort level with computers (Marylhurst College, 1997). As further refinements are made to this program, it is hoped that student perceptions of online offerings will be even higher.

While this study has provided some initial answers to important questions concerning online course offerings, it still has a few limitations. A sample of 206 is reasonable for statistical analyses. However, it would be advantageous to gather data from a larger sample of online students. It would also be desirable to determine whether improvements in the training of *faculty* to use this new technology will lead to higher levels of student satisfaction in the future. In addition, it would be most helpful if comparisons could be made to similar courses offered in a traditional classroom setting, both in terms of student perceptions as well as in the attainment of learning objectives (Arbaugh, 2000b). While student perceptions are important, this does not necessarily correlate directly into proficiency on other important outcome measures, such as learning (Alliger & Janak, 1989). Obviously, it would be very difficult to carry off such comparisons in a rigorous and controlled manner. Yet, such research is clearly needed.

Online courses are likely to continue their exponential growth for the foreseeable future (Phillips, 1998). More research concerning the effectiveness of such courses is

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necessary to move forward. This study provides a beginning step in this direction. The conclusions can provide some practical guidance to universities (and others) involved in the provision of such courses. Further research is warranted and strongly encouraged.

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Appendix. Evaluation Survey

Please rate the following statements using the scale below:

7 = Strongly Agree	3 = Mildly Disagree
6 = Agree	2 = Disagree
5 = Mildly Agree	1 = Strongly Disagree
4 = Neither Agree nor Disagree	

Level of communication with instructor

1. Technical assistance was available to remedy problems.
2. The instructor was accessible to me as an online student.
3. The instructor responded to my questions in a timely manner.
4. Feedback on performance was provided to students in a timely manner.
5. The instructor provided sufficient feedback on assignments.
6. My instructor was actively helpful when students have problems.

Level of technical expertise and assistance needed

7. Did you feel that the training you received in using the Learning Space and Lotus Notes software was sufficient?
8. I felt I had adequate technical skills to succeed in this course.
9. The course made effective use of existing distance education technology.

Interactions with other students

10. I had sufficient opportunity to interact with other students in this course.
11. Student interaction in this course was effective.

Effectiveness of delivery method

12. This online course was as effective for my learning as traditional classroom courses that I have taken.
13. This online course included applied learning and problem solving experiences.
14. The content in this online course was presented in the same depth as that in a traditional classroom course.

Likelihood that you would recommend this course to others

15. I would recommend this course, using this technology, to friends/colleagues.
16. The materials in this course were presented in a manner that made learning enjoyable.

Academic Dishonesty of Business Students in Selected Central Europe and U.S. Universities

Robert A. Lupton and V. Wayne Klemin, Central Washington University, Ellensburg, Washington

ABSTRACT

A comparative study was conducted to determine the attitudes, perceptions, and tendencies of U.S. and Central European business college students toward academic cheating. The objectives were to determine if there are differences in: (a) the percentage of students who cheat on examinations, (b) the knowledge of others who have cheated on examinations, (c) perceptions that "cheating on examinations is wrong," (d) attitudes about the instructor's responsibility to reduce cheating incidents, (e) beliefs about what constitutes a cheating situation when giving or using a previous semester examination or course material.

Statistically significant differences exist between U.S. and Central European business college students regarding how often they engaged in such cheating behaviors and what constitutes a cheating situation. The population consisted of 1,337 undergraduate business college students from the U.S. and Central Europe.

The results showed that Central European business college students engaged in more examination cheating than their counterparts in the U.S. Central European business college students felt that when students used another student's examination from a previous course to prepare for an upcoming examination they were cheating, while U.S. business college students felt that it was not a form of cheating. Central European and U.S. business college students were indecisive about the instructor's ability to reduce cheating. More male business college students than female students have cheated on papers and examinations.

Cheating among U.S. college students is well-documented in many published reports. The majority of these studies have examined reasons why cheating occurs and the relationship between individual behavior and cheating. Some studies have also measured how educators react to cheating as well as reported recommendations on how it can be reduced. Perhaps the most pervasive finding identified in the literature is that the majority of college students do participate in some sort of academic dishonesty. A preponderance of U.S. studies reported cheating incidences in excess of 70% (Baird, 1980; Collison, 1990a; Davis, Grover, Becker, & McGregor, 1992; Gail & Borin, 1988; Jendrek, 1989; Lord & Chiodo, 1995; McCabe & Trevino, 1996; Oaks, 1975; Stern & Havlicek, 1986; Stevens & Stevens, 1987). The most common infractions are those associated with examination cheating and plagiarism.

Demand for U.S. business curricula has risen dramatically in post-socialist Central and Eastern Europe. Moreover, students from other countries continue to enroll in U.S. colleges and universities. Therefore, U.S. business educators teaching abroad and those hosting foreign students locally need to better understand the nuances and attitudes of different student populations and the association with classroom management.

PROBLEM AND PURPOSE

Journal literature on student cheating gives the impression that cheating is widespread and well accepted among students. Comparative research measuring cheating attitudes, perceptions, and tendencies between U.S. and international business students is virtually non-existent. The purpose of the study was to compare the attitudes, perceptions, and tendencies of U.S. and Central European business college students toward academic cheating. The study also looked at gender differences. The primary objectives of the study were to:

1. determine if there is a difference in the percentage of students who cheat on examinations,
2. determine if there is a difference in the knowledge of others who have cheated on examinations,
3. determine if there is a difference in the perceptions that "cheating on examinations is wrong,"
4. determine if there is a difference in the attitudes about the instructor's responsibility on reducing cheating incidents,
5. and determine if there is a difference in the beliefs about what constitutes a cheating situation when giving or using a previous semester examination or course material.

REVIEW OF THE LITERATURE

In the U.S., academic cheating on campuses appears endemic. Hartshorn and May (1928) provide early historical documentation of the interest to investigate U.S. classroom cheating during the last century. Parr (1936) presented an

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article in the *Journal of Higher Education* called "The Problem of Student Honesty." Parr concluded that "The questions of how much and why students cheat have been debated for many years without making a great deal of headway" (p. 318). Five years later, Drake (1941) provided additional insight in the *Journal of Higher Education* by writing "Why Students Cheat." Drake stated "There is already a rather large amount of literature on the subject [cheating], much of it reporting experimental studies and surveys which reveal the nature, the extent, and some of the motives that give rise to the behavior in question" (p. 418). Indeed, U.S. academicians have addressed the issues of cheating for the past century publishing over 200 journal articles and reports (Payne & Nantz, 1994).

The majority of U.S. research defines cheating as copying from another student during an examination; using crib notes; helping someone else cheat; or plagiarizing, falsifying, or using dishonest methods to complete assignments (Alschuler & Blimling, 1995; Antion & Michael, 1983; Baird, 1980; Gail & Borin, 1988; Davis & Ludvigson, 1995; Evans & Craig, 1990b; Houston, 1976, 1977, 1980, 1983; LaBeff, Clark, Haines, & Diekhoff, 1990; McCabe & Trevino, 1996). The U.S. literature is consistent in defining cheating in U.S. schools. The international literature reports identical cheating definitions as those presented in the U.S. literature (Evans, Craig, & Mietzel, 1993; Genereux & McLeod, 1995; Harpp & Hogan, 1993; Newstead, Franklyn-Stokes, & Armstead, 1996; Poltorak, 1995; Waugh, Godfrey, Evans, & Craig, 1995).

The U.S. literature on cheating can be divided into five primary areas: (a) reporting the incidences and types of cheating, (b) reporting the causes of cheating (behavioral and situational), (c) reporting the reactions of academicians toward cheating, (d) discussing the prevention and control of cheating, and (e) presenting research methodologies used to measure academic misconduct.

The majority of U.S. studies have researched cheating incidences and types among postsecondary college students by age, gender, GPA, major, student level, and cheating type (Baird, 1980; Bowers, 1964; Drake, 1941; Evans & Craig, 1990a, 1990b; Haines, Diekhoff, LaBeff, & Clark, 1986; Houston, 1983; Kelly & Worrell, 1978; McCabe & Bowers, 1994, 1996; Parr, 1936; Stern & Havlicek, 1986; Zastrow, 1970). Some U.S. studies have looked at attributes associated with behavior, such as criminal deviance, intelligence levels, and personality (Bunn, Caudill, & Gropper, 1992; Hetherington & Feldman, 1964; Houston, 1978, 1983; McCabe, 1992; McCabe & Trevino, 1997; Tittle & Rowe, 1973; Ward, 1987) and other studies have looked at situational factors such as seating proximity, self-esteem, anxiety, and peer pressure (DeVries & Ajzen, 1971; Houston, 1976, 1986; Johnson & Gormly, 1971; LaBeff, Clark, Haines, & Dickhoff, 1990; McCabe & Bowers, 1996; McCabe & Trevino, 1997; Roig & DeTommaso 1995; Uhlig & Howes, 1967).

U.S. researchers have also evaluated teacher apathy and response to academic misconduct (Ackerman, 1971; Blinn, 1994; Houser, 1982; Jendrek, 1989). A few studies have tested controversial statistical programs which attempt to identify cheating perpetrators (Frary, Tideman, & Nicholaus, 1997; Frary, Tideman, & Watts, 1977; Scheers & Dayton, 1987).[1]

International Literature

While the U.S. literature is prolific and diverse when addressing cheating differences, the international literature on cheating is limited. The international literature provides anecdotal evidence supported by mostly *non-comparative* research studies. International literature primarily has studied the incidents and types of cheating, as well as the behaviors and situations associated with cheating. International studies and reports have looked at college students in Australia (Maslen, 1996; Waugh & Godfrey, 1994), Canada (Black, 1962; Chidley, 1997; Harpp & Hogan, 1993, 1998; Genereux & McLeod, 1995; Jenkinson, 1996), Great Britain (Baty, 1997; Bushby, 1997; Franklyn-Stokes & Newstead, 1995; Mackenzie & Smith, 1995; Newstead, Franklyn-Stokes, & Armstead, 1996), Palestine (Surkes, 1994), Poland (Curry, 1997), and Russia (Poltorak, 1995), and high school students in Austria (Hanisch, 1990) and Germany (Rost & Wild, 1990). The international *non-comparative* cheating research (originating from within country) has derived mostly from Canada and England.

Only a few studies have investigated cross-national differences related to academic dishonesty (Curtis, 1996; Davis, Noble, Zak, & Dreyer, 1994; Diekhoff, LaBeff, Shinohara, & Yasukawa, 1999; Evans, Craig, & Mietzel, 1993; Lupton, Chapman, & Weiss, 2000; Waugh, Godfrey, Evans, & Craig, 1995). Curtis (1996) found cheating widespread in Switzerland, Austria, Italy, Germany, and U.S. middle schools. Evans, et al. (1993) and Waugh et al. (1995) conducted their research on high school students from Australia, Austria, Canada, Costa Rica, East Germany, and West Germany. A major chasm in our knowledge exists regarding cross-national attitudes, perceptions, and tendencies toward cheating at the postsecondary education level.[2]

Yet, educators hosting foreign students locally and teaching abroad need to understand the nuances and attitudes of different student populations and the association with classroom management. The better understanding we have of if, and how, international students' attitudes, perceptions, and tendencies toward academic dishonesty differ among countries, the greater the instructor's ability to communicate with expatriate students and take action to prevent cheating. Of the 1.5 million students that study abroad, nearly a third of them (481,280) studied in the United States (Chronicle of Higher Education, 1998). Universities also continue to send faculty abroad to teach. Organizations such as the International Institute of Education (IIE), the Council for International Educational Exchange (CIEE), and the Agency for International Development (AID) encourage global education and resource exchanges abroad. Postsecondary business education has been introduced to the former Soviet Union republics and to East Asia, bringing American faculty and resources to these regions (Fogel 1994; Kerr 1996; Kyj, Kyj, & Marshall 1995; Petkus 1995). As the student body becomes more international and as more educators teach abroad, research of this nature becomes vital for effective classroom management.

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METHODS OF THE STUDY

Description of the Population

The population of this study was business students representing four universities: Wyzaza Szkola Biznesu in Tarnow, Poland (N = 192); City University Slovakia in Trencin, Slovak Republic, (N = 485); Colorado State University in Fort Collins, Colorado (N = 445); and Bentley College in Boston, Massachusetts (N = 215). A total of 1,390 surveys were returned representing all four schools, with 1,337 surveys deemed useable.

The data from Central Europe are convenience samples; the questionnaires were administered to students during their business classes. The students were randomly assigned into cohort groups. There was no self-selection into different lectures. While administering the survey was not a random process, each class was likely to be representative of its degree program and year. The data from the U.S. are also convenience samples. U.S. schools were chosen for their demographic and socioeconomic similarities, one representing the western region and the other the eastern region. The researchers attempted to administer the survey in mutually exclusive business courses. Care was taken to survey classes that were scheduled at conflicting times (i.e. introductory lectures, required upper level business courses) to eliminate surveying the same respondent.

Overall, 659 males, 667 females, and 11 nonresponse gender participated in the study, of which 24.9% were U.S. male, 24.6% U.S. female, 24.9% Central European male, and 25.6% Central European female. Approximately 20.1% were freshmen, 15.7% sophomore, 30.9% juniors, and 32.1% seniors.

Instrumentation

To evaluate the attitudes, perceptions, and tendencies toward academic cheating, the self-reporting survey instrument was used consisting of dichotomous (yes/no) and seven-point scale (1 = strongly disagree/7 = strongly agree) questions.[3] Some questions dealt with general attitudes towards examination cheating and other questions looked at how much examination cheating was taking place during college. Most empirical studies attempting to measure students' attitudes, perceptions, and tendencies about cheating use self-reporting questionnaires (Payne & Nantz, 1994). The short survey allowed for minimal classroom disruption and was completed within ten minutes. The survey included basic demographic questions.

The U.S. literature guided the development of the survey instrument. Survey instruments developed by Baird (1980), Evans, Craig, and Mietzel (1993), Gardner and Melvin (1988), Lord and Chiodo (1995), and Stevens and Stevens (1987) were used as guides in developing questions to ascertain cheating tendencies, cheating situations, cheating tactics, faculty issues, and basic demographics.

Validity has been established by reviewing the U.S studies and instruments, by discussing the survey content with other researchers of academic dishonesty, and by evaluating previous data collected with the survey instrument from the U.S. and Central Europe. To help validate the survey instrument, a preliminary qualitative study using an open-ended questionnaire was conducted to operationally define cheating. Hyper Research was used to analyze 12 Central European and 16 U.S. business college students and their definitions of cheating. As recommended by Strauss and Corbin (1990), the researchers used line-by-line open coding to break down, examine, compare, and categorize the cheating definitions/themes. Copying from another during an examination, looking at personal notes during an examination, and plagiarism were all cited as major forms of cheating. The results suggest both regions indeed have similar perspectives on cheating definitions and issues.

Data Analyses

The data were analyzed using the ANOVA. The goal was to identify statistically significant differences at the .05 level or less. Following the identification of a significant *F* value on gender, Tukey's *post hoc* was used to identify which gender by country was significant (U.S. male and female; Central European male and female). Respondents were asked to read a short scenario representing possible cheating incidences and evaluating the degree of cheating. Additionally, the students responded to questions that looked at various cheating situations. These cheating questions were analyzed using Chi Square (Cramer's V). The data were examined using SPSS.

FINDINGS

There were statistically significant differences between U.S. and Central European postsecondary business college students on how often they engaged in such cheating types and of what constitutes a cheating situation. Two-by-two ANOVAs were used for analysis on two independent variables each with two levels: region (U.S. and Central Europe) and gender (male and female). None of the 2 x 2 ANOVAs revealed any significant interaction effects between region and gender among the dependent variables, and only one variable had significant main effects on gender: Estimation of percentage cheating on examinations $F=13.647$, $p<.05$ (See Tables 1 & 2). Significant main effects, however, were found on region: (a) estimation of percentage cheating $F=143$, $p<.0001$; (b) knowledge of others cheating on exams in class $F=612$, $p<.0001$; (c) "cheating on an examination is wrong" $F=386$, $p<.0001$; (d) instructor responsibility $F=11.2$, $p<.001$, and (e) cheating situation is giving or using previous semester examinations $F=244$, $p<.0001$. There were also statistically significant differences between U.S. and Central European postsecondary business students when evaluating the short scenario representing possible cheating incidences and degrees of cheating, as well as when evaluating the cheating situations (See Tables 3 and 4). Using Chi Square (Cramer's V), both region and gender were significant at .05 or less p value.

Estimated Percentage of Students Cheating on Exams

To measure the estimated percentage of those cheating on examinations, a two-way ANOVA was performed. Both main effects were significant (Region, $F=143$, $p<.0001$; Gender, $F=13.65$, $p<.0001$;). There was no interaction. The U.S. and

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Table 1. 2 x 2 ANOVA Summary Table for Region and Gender

Source	REGION F	REGION Sig.	GENDER F	GENDER Sig.	INTERACTION F	INTERACTION Sig.
Estimated percentage students cheating on exams	143.00	.0001	13.65	.0001	.025	.873
Knowledge of others cheating on exams in class	612.00	.0001	.062	.804	1.245	.265
"Cheating on examinations is wrong"	386.00	.0001	.378	.539	1.160	.281
Instructor's impact on reducing cheating incidents	11.12	.001	.019	.890	2.30	.130
Cheating situation is giving or using previous semester examinations	244.00	.0001	.003	.945	.251	.617

Table 2. Mean and Standard Deviation Summary Table for Region and Gender

	Mean and Standard Deviation							
	REGION				GENDER			
Source	U.S. μ	SD	C.E. μ	SD	M μ	SD	F μ	SD
Estimated percentage students cheating on exams	26.54*	20.51	43.35*	28.28	32.36*	25.97	37.54*	25.75
Knowledge of others cheating on exams in class	1.90*	.274	1.39*	.448	1.64	.450	1.64	.450
"Cheating on examinations is wrong"	5.61*	1.45	3.83*	1.81	4.70	1.87	4.80	1.85
Instructor's impact on reducing cheating incidents	3.96*	1.23	4.20*	1.38	4.08	1.39	4.09	1.23
Cheating situation is giving or using previous semester examinations	2.60*	1.60	4.00*	1.64	3.30	1.79	3.30	1.73

*Significant at the .01 level (2-tailed)

Central Europe estimated percentage of cheating on examinations were 26.55% and 43.35%, respectively. At the 95% level, the confidence intervals for the U.S. were 24.63% to 28.46% and for Central Europe were 41.38% to 45.32%. Male students estimated examination cheating at 32.36% with female students estimating 37.54%. The 95% confidence intervals for male students were 30.43% to 34.29% and for female students were 35.58% to 39.50%. There were no significant differences within the U.S. or Central European samples on gender.

Knowledge of Others Cheating on Exams in Class

Only the region main effect was significant (Region, F=612, p<.0001). Gender was not significant and there was no interaction. The U.S. and Central European student means for knowledge of others cheating on examinations in class were 1.90 and 1.39, respectively.[4]

Cheating on an Examination is Wrong

Only the region main effect was significant (Region, F=386, p<.0001). Gender was not significant and there was no interaction. The U.S. and Central European student means for "cheating on an examination is wrong" were 5.61 and 3.83, respectively.[5]

Instructor's Responsibility on Reducing Cheating Incidents

Only the region main effect was significant (Region, F=11.12, p<.0001). Gender was not significant and there was no interaction. The U.S. and Central European student means for instructor's responsibility were 3.96 and 4.2, respectively.[6]

Cheating Situation Is Giving or Using Previous Semester Examinations

Only the region main effect was significant (Region, F=244, p<.0001). Gender was not significant and there was no interaction. The U.S. and Central European student means for rating a cheating situation as giving or using a previous semester examination were 2.60 and 4.0, respectively.[7]

Degree of Cheating Situation: Mini Case Scenario

Respondents were asked to read a short scenario representing several possible cheating incidences when giving or using a previous semester examination or course material. Three questions were presented, each dealing with a degree of cheating. Chi Square analysis was used to test the variables. All three questions on region were significant at a .0001 or less p value (See Table 3). Gender was not significant.

Both regions felt it was not cheating when one student provided another student with previous course material to use in an upcoming class (U.S. = 91%; Central Europe = 83%). Fifty-eight percent of the Central European students felt that when students used another student's examination from a previous course to prepare for an upcoming examination they were cheating. Eighty-three percent of the U.S. students felt that it was not a form of cheating. Both regions felt turning in another student's written work for class constituted cheating (U.S. = 76%; Central Europe = 65%).

The students also responded to dichotomous (yes/no) questions about cheating situations. When examining the data by region, all six questions were significant at a .05 or less p value; and when examining the data by gender, three questions were significant at a .01 or less p value (see Table 4).

Of the Central European students, 86% reported knowing someone who had cheated on an examination at school, as did 80% of the U.S. students. Gender was not significant. There were 73% of the Central European students who reported actually seeing someone cheat at school; 64% of the U.S. students reported seeing someone cheat at school. Male students observe more students cheating than did the female students (Male = 72%; Female = 66%).

When asked if they ever cheated on a paper or examination during college, Central European students reported engaging in these two types of cheating more often than U.S.

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Table 3. Attitude Concerning Cheating: Mini Case Scenario

John took Marketing 400 in the Fall Semester, 1999. His friend, Jane, took Marketing 400 in the Spring Semester, 2000. John gave Jane all his prior work from the course. Jane found John's answers to prior exams and uses these to prepare for tests in the course. Jane also discovered that John had received good grades on some written assignments for the class. Many of these assignments required John to go to the library to look up articles about various topics. Jane decides to forego the library work and uses John's articles for her papers in the class.

	REGION		GENDER	
Question	% Yes US	% Yes CE	% Yes Male	% Yes Female
Do you believe that John has cheated?	11%*	17%*	14%	14%
Do you believe that Jane has cheated using John's prior exam answers?	17%*	58%*	35%	40%
Do you believe that Jane has cheated using John's prior written assignments?	76%*	65%*	68%	72%

*Significant at the .01 level (2-tailed)

Table 4. Summary Table for Six Additional Questions on Cheating Tendencies

	REGION		GENDER	
Question	% Yes US	% Yes CE	% Yes Male	% Yes Female
Have you known someone that has cheated on an exam at this university?	80%*	86%*	85%	81%
Have you seen someone cheat on an exam at this university?	64%*	73%*	72%**	66%**
Have you ever cheated (Exam/ paper) during college?	58%*	66%*	68%*	56%*
Have you used someone's exam answers from a previous examination?	83%*	31%*	59%	55%
After an exam, have you given a student in a later section the answers?	68%**	63%**	60%**	70%**
Have you ever received information for an upcoming exam from a student who has just taken exam?	72%*	60%*	64%	68%

*Significant at the .01 level (2-tailed)
**Significant at the .05 level (2-tailed)

students (U.S. = 58%; Central Europe = 66%). Male students reported higher rates of cheating on papers and examinations than female students (Male = 68%; Female = 56%).

Three final incident questions dealt with using, giving, or receiving exams for the purpose of gaining or giving insight into an upcoming examination. Overall, U.S. students reported higher tendencies toward these types of cheating than Central European students. The largest significant difference observed dealt with using someone's examination answers from a previous exam. Eighty-three percent of the U.S. respondents and only 31% of the Central European students reported that they have engaged in this type of cheating. Gender was not significant.

When asked if they had ever cheated by providing information to another student about an examination just taken, both regions reported incident rates above 60% (U.S. = 68%; Central Europe = 63%). Seventy-two percent of the female students admitted to giving a student examination information in a later section. Only 60% of the male respondents indicated they had engaged in this activity.

Analysis of Possible Confounds

When conducting any research, it is always difficult to rule out alternative explanations about results found. For example, although a number of differences were found based on region, these differences may be due to some other issue. Past literature has suggested that a number of variables could influence the likelihood that someone cheats (e.g. Alschuler & Blimling, 1995; Bunn, Caudill, & Gropper, 1992; Johnson & Gormly, 1971; Kelly & Worrell, 1978; McCabe & Trevino, 1996; Stern & Havlicek, 1986; Stevens & Stevens 1987). Neither overall grade point average, class standing, nor age interacted with country, nearly eliminating the possibility of them as confounds for the differences found due to region.

CONCLUSIONS

Overall, this study found statistically significant differences between U.S. and Central European business college students, and limited differences among male and female business college students. The following conclusions were based on the results of this study:

1. Female postsecondary business college students perceived higher levels of cheating on examinations than did male postsecondary business college students.
2. Central European and U.S. postsecondary business college students have known someone who had cheated on an examination at school.
3. U.S. postsecondary business college students felt cheating on examinations is wrong.
4. Central European and U.S. postsecondary business college students were indecisive about the instructor's ability to reduce cheating.
5. Both Central European and U.S. postsecondary business college students have provided examination information to other students after taking a test. Central European postsecondary business college students; however, felt that when students used another student's examination from a previous course to prepare for an upcoming examination, they were cheating. U.S. postsecondary business college students felt that it was not a form of cheating. Thus, U.S. postsecondary business college students have used someone's examination answers from a previous exam to prepare for an upcoming examination more often than Central European students. U.S. students have also received information for an upcoming examination from another student who had just finished the exam more often than Central European students.
6. Central European and U.S. postsecondary business college students felt it was not cheating when one

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student provided another student with previous course material to use in an upcoming class.

7. Central European and U.S. postsecondary business college students felt turning in another student's written work for class constituted cheating.
8. Central European postsecondary business college students have actually witnessed cheating by their peers more often than have U.S. students.
9. More male postsecondary business college students than female students have cheated on papers and examinations.
10. Central European postsecondary business college students engaged in more examination cheating than their counterparts in the U.S. Additionally, Central European postsecondary business college students admitted more often to cheating on a paper or examination than U.S. students.

RECOMMENDATIONS AND IMPLICATIONS

These findings indicate that no simple measure or issue is, by itself, an answer to academic dishonesty. Based on the findings and conclusions of this study, the following recommendations and implications are offered:

1. Cheating is prolific in postsecondary education. This conclusion is supported by both the literature and this study. Business faculty should endeavor to make clear to students that cheating violations will be met with consequences.
2. Examination cheating and plagiarism are prevalent in Central Europe. U.S. business faculty should develop test preparation strategies that are flexible enough to use in other countries. U.S. faculty teaching in Central Europe may need to offer alternative testing tools such as oral presentations, open-book examinations, or multiple test versions. Other strategies to reduce examination cheating include essay questions and case analysis.
3. Business faculty might also collaborate on a universal academic honor code. This could be a declaration for which other schools and countries could adopt. What seems to be necessary is some sort of schedule of academic misconduct and related sanctions that are understood by both students and faculty—locally and abroad.
4. This study should be replicated in other countries. The need for this research is evident by the increased expansion of U.S. colleges and universities globally. U.S. schools continue to send faculty abroad to develop education programs and to collaborate with international institutions. Comparative research looking at additional countries would provide deeper insight to the similarities and differences of one component of academic dishonesty.

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[1]For a comprehensive review of the U.S. cheating literature, see Lupton (1999) published dissertation.
[2]For a comprehensive review of the international cheating literature, see Lupton (1999) published dissertation.
[3]For survey instrument, see Lupton (1999) published dissertation.
[4]On a three-point scale (1 = two yeses/1.5 = one yes/2 = no yeses).
[5]On a seven-point scale (1 = strongly disagree/7 = strongly agree).
[6]On a seven-point scale (1 = strongly disagree/7 = strongly agree).
[7]On a seven-point scale (1 = strongly disagree/7 = strongly agree).

2000–01 Business Education Research Studies

This compilation of Research Studies in Business Education completed in 2000–01 is compiled by the National Business Education Association (NBEA) and is published as a convenient reference. The information included in this listing is collected from member colleges and universities which make up the National Association for Business Teacher Education. Representatives from these institutions were asked to report on research studies leading toward a graduate degree in business education. The studies are listed alphabetically, and there are no major classification categories for specific groups of studies. Instead, studies can be indexed according to the key words listed at the end of each entry.

ANDERSON, JOHN. "Training Needs Assessment, Evaluation, Success, and Organizational Strategy and Effectiveness: An Exploration of the Relationships." Utah State University, Ph.D. 2001. (Training Needs Assessment)

ANDERSON, LESLIE. "Welfare Recipients' Perceptions of Job Skill and Training Programs Designed To Prepare Them for the Workforce." Southern Illinois University Carbondale, M.S. 2000. (Workplace Training, Training Programs)

BLAMER, PAMELA J. "Employment Skills for the New Millennium-A Review of the Business Services and Technology Core Competencies." Central Michigan University, M.B.E. 2000. (Employment Skills, Competencies)

BOYETT, SHANE. "Computer Literacy and Training Needs of DuQuoin High School Faculty." Southern Illinois University Carbondale, M.S. 2000. (Computer Literacy, Teacher Training)

BURCHFIELD, M. KATHY. "A Study of Distance Learning in Missouri High Schools." Southwest Missouri State University, M.S. 2000. (Distance Education)

BURKE, JACQUELINE A. "A Comparison of Collaborative Accounting Problem Solving Via Group Support Systems in a Face-to-Face Versus a Distant Learning Environment." New York University, Ph.D. 2000. (Accounting, Group Support Systems, Problem Solving)

BUSCH, ANDREA H. "Secondary Vocational and Applied Technology Education and Its Impact on the Transition from Education to Employment." University of Houston, Ed.D. 2001. (Secondary Vocational Education, Applied Technology Education, Transition School-to-Work, School-to-Career, Employment, Assessment and Evaluation)

BUSH, MARCIA. "Spreadsheet Competencies Needed for Entry-Level Managerial Positions in Accounting and Business/Information Systems." Utah State University, Ph.D. 2001. (Spreadsheet Competencies for Managerial Positions)

CAMPBELL, EDWARD. "Federal Funding Success Factors in Biology and Mathematics." Utah State University, Ph.D. 2001. (Federal Funding in Biology and Mathematics)

DOBBINS, JOHN W. "Business Student Satisfaction in Terms of Academic and Social Integration and the Relationship of These Variables to Institutional and Goal Commitment: A Marketing Perspective." New York University, Ph.D. 2000. (Marketing, Student Satisfaction, Retention)

FULLERTON, MICHELLE. "Workplace Skills Needed for Entry-Level Employment in the Hollister/Branson, Missouri Area." Southwest Missouri State University, M.S. 2000. (Workplace Readiness, Entry-Level Skills)

GUTIERREZ, AMY KELLEY. "Teachers' Self-Perception of Computer Usage With and Without Training." Central Michigan University, M.B.E. 2000. (Computer Usage)

HENDERSON, DONNA. "Basic Workplace and Computer Literacy Skills for Entry-Level, Nonbaccalaureate-Degree Employees of the Silicon Valley Computer Industry." Utah State University, Ph.D. 2001. (Basic Workplace and Computer Literacy Skills)

JEAN, SHERRI. "Business Teachers' Need for Counseling Skills." Southern Illinois University Carbondale, M.S. 2000. (Teacher Training, Counseling)

JIMENO, CHERI. "Integrating Cultural Concepts That Influence International Business into the Secondary Business Education Curriculum." Utah State University, Ph.D. 2001. (Cultural Concepts in International Business)

LANDIS, DAWN MARIE. "The Effectiveness of Employment Portfolios of High School Students." Central Michigan University, M.B.E. 2000. (Employment Portfolios)

LATHAN, GRENITA. "A Qualitative and Quantitative Analysis of Selected Female Superintendents of Schools in Illinois and North Carolina." Southern Illinois University Carbondale, Ph.D. 2000. (Administration)

McGOWAN, HELEN N. "An Analysis of Selected Psychological and Demographic Variables and the Job Satisfaction of *Certified Financial Planners.*" *New York University,* Ph.D. 2000. (Job Satisfaction, Certified Financial Planners)

ORR, PATRICIA. "A Case Study: Performance Evaluation as a Cultural Change Tool." Southern Illinois University Carbondale, Ph.D. 2000. (Assessment, Evaluation)

PETERSON, ERIC ALEXANDER. "An Analysis of the Readability of Beginning Keyboarding Textbooks Used in Business Education Programs Within the State of Washington." Central Washington University, M.Ed. 2000.

RENDLEMAN- WILLIAMS, VIRGINIA. "SCANS Instruction in Southern Illinois Schools." Southern Illinois University Carbondale, M.S. 2000. (Workplace Training, Competencies)

REUSCH, DIANNA. "The Nature and Characteristics of Post-Baccalaureate Reverse Transfer Students and Their Utilization of Career Guidance." Southern Illinois University Carbondale, Ph.D. 2000. (Career Guidance, Non-Traditional)

RYAN, NANCY, L. "Perceptions of Business Educators on the Impact of Alternative Scheduling Formats on High School Business Education in Springfield Missouri." Southwest Missouri State University, M.S. 2000. (Alternative Scheduling Formats, Block Scheduling)

THELEN, DEANNA. "Does Completion of NEAP/BST Curriculum Culminating in Achievement of Certified Network Administrator Status Result in Placement in Michigan Business and Industry." Central Michigan University, M.B.E. 2000. (Placement, Certified Network Administrator, NEAP Certification)

TORRESSEN, ALBERT M. "A Study To Examine Perceived Role Ambiguity, Role Conflict, Participation in Decision Making, Ability, and Job Satisfaction Among Intellectual Property Licensing Professionals." New York University, Ph.D. 2000. (Job Satisfaction, Roles, Intellectual Property)

WESTON, TAMMY. "University Business Communications Students' Business Document Design/Format at Course Beginning." Southern Illinois University Carbondale, M.S. 2000. (Communications, Keyboarding)

WILLIAMS, SANDRA. "Curriculum Revision and Implementation: Implications for Business Teacher Education." The University of Montana, Ed.D. 2000. (Curriculum Revision, Curriculum Implementation, Curriculum and Enrollment)

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